

EasyMP[™] Operation Guide

Multimedia Projector

EB-G5350

EB-G5150



Contents



| EasyMP Summary | 4 |
|---|----|
| Installing the Software | 5 |
| Connecting with EMP NS Connection | |
| Overview of EMP NS Connection | 8 |
| Two Connection Modes and their Main Functions | |
| Steps for Connecting in Advanced Connection Mode | |
| Preparing to Connect | |
| Preparing the Computer | 10 |
| Preparing the Projector | |
| Connecting to a Projector on a Network and Projecting | |
| Operating the ProjectorOperating the Computer | 11 |
| Using the Connection Screen | 12 |
| Using the Toolbar | |
| Convenient EMP NS Connection Functions | |
| Projecting Only a PowerPoint Slide show (Presentation Mode) | 18 |
| Projecting Movies from a Computer (Movie Sending Mode) | |
| Supported File Types | |
| Playing back a movie | 19 |
| Using Multi-Screen Display | 21 |
| Example of Adjusting the Virtual Display | |
| Procedure before using the Multi-screen Display Function | |
| Setting the Virtual DisplayAllocating the image to be projected | |
| The allocated image is projected | |
| The anotates image to projected imminimum. | |

| Connecting to a | Projector on a | Different S | Sub-net |
|-----------------|----------------|-------------|---------|
|-----------------|----------------|-------------|---------|

| Connecting to a Projector on a Different Sub-net | 32 |
|---|----|
| Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only) | 33 |
| Performing a search with a profile | |
| Making a Profile | |
| Searching by Specifying a Profile | 36 |
| Managing a Profile | |
| Setting the EMP NS Connection Operation | |
| Using Set Options | 40 |
| General settings Tab | 40 |
| Adjust Performance Tab | 41 |
| Using a Computer to Set Up, Monitor and Control Projectors | |
| Changing Settings Using a Web Browser (Web Control) | 43 |
| Displaying Web Control | |
| Projector Setup | |
| Using the Mail Notification Function to Report Problems | 44 |
| Management Using SNMP | 45 |

Presentations Using PC Free

| Files that can be Projected Using PC Free, and Saving | 47 |
|---|-----------|
| Specifications for Files that can be Projected Using PC Free | |
| Copying or Deleting SD Card Files over the Network | |
| PC Free Examples | 50 |
| PC Free Basic Operations | 51 |
| Starting and Closing PC Free | 51 |
| PC Free Basic Operations | 54 |
| Rotating the Image | |
| Projecting Scenarios | |
| Creating and Editing a Scenario | |
| Playing a Scenario | 57 |
| Operating During a Presentation | |
| Projecting image and movie files | |
| Projecting Images/Movies | |
| Projecting all Image and Movie Files in a Folder in Sequence (Slide show) | 59 |
| Setting Image and Movie File Display Conditions and | |
| Operation Mode | 60 |
| Preparing a Scenario (Using EMP SlideMaker2) | |
| Topaming a committee (coming 2 chacination 2.) | |
| Scenario Summary | 62 |
| Files that Can be Included in Scenarios | |
| Turning a PowerPoint File into a Scenario | |
| Converting all files in a single operation without starting up | |
| SlideMaker2 | 65 |
| Starting up SlideMaker2 and Converting Files | |
| Setting Scenario Properties | |
| Including PowerPoint Files in Scenarios | |
| Including Image and Movie Files in Scenarios | |
| Editing a Scenario | |
| Sending Scenarios | |
| | / 🗸 |
| Cases Like These | |
| Cases Like These | 77 |
| Cases Like These | 77 |

Appendix

| Connection Limitations | 81 |
|--------------------------|----|
| Supported Resolutions | 81 |
| Display Color | |
| Connection Number | 81 |
| Others | 81 |
| When Using Windows Vista | 82 |
| Troubleshooting | 83 |
| Glossary | |

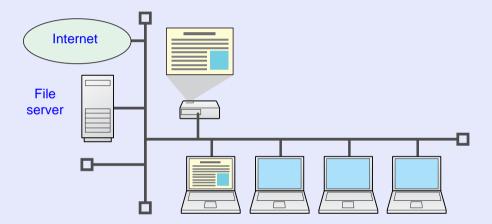
4

EasyMP Summary

The following functions in EasyMP (Epson Administrative System for Meeting and Presentation) can lend you huge support in creating varied and effective meetings and presentations.

Connect the projector to a computer via a network and project (EMP NS Connection)

You can hold efficient meetings and presentations by connecting the projector to a network.



■ Advance preparation is unnecessary

Because you can project materials stored on a shared file server or on your desktop from the conference room, you do not need to make copies of data in advance.

■ Smooth progress

If the projector is connected to a network, you can share the projector from computers on the network. When projecting data from different computers during a meeting or presentation, you can progress smoothly without changing the signal cable between each computer.

Even a large distance between the projector and the computer does not cause any problems.

■ Various screen transfer functions

- Distribution function p.9
- Switching function p.9
- Multi-screen display **p.21**
- Movie sending mode **p.19**
- Presentation mode p.18

■ Monitor, configure, and control the projector from a remote location

The following convenient functions collectively manage projectors in various conference rooms.

- Monitor and detect problems from SNMP Manager on the network
 p.45
- Receive an e-mail notification if a problem occurs p.44
- Set and control the projector by using a standard computer Web browser
 p.43

Project images from your computer using "Network projector" in Windows Vista

With Windows Vista, you can use the standard feature "Network projector" to connect the projector to a computer via a network and then project. This lets you make presentations via a network by simply using a standard OS function without installing any software. ** User's Guide "Regarding Network Projector (EB-G5350/G5150 only)"

Project directly from SD cards and USB devices (PC Free)

Connect a USB cable to your computer and project images from the computer's screen (USB Display)

By using a commercially available USB cable to connect to a computer running Windows you can project images from the computer. ** User's Guide** "Connecting with a USB Cable and Projecting (USB Display EB-G5350/G5150 only)"

Installing the Software

To use the EasyMP functions, install the software from the supplied EPSON Projector Software for Meeting & Presentation CD-ROM onto your computer.

Software Supplied

• EMP SlideMaker2

You can find the following software on the EPSON Projector Software for Meeting & Presentation CD-ROM.

- EMP NS Connection Software for sending computer screen images to connected projector via a network connection.
- Software for converting PowerPoint files into scenario files that can be projected directly with PC Free.
- Only the necessary slides are extracted and sorted without changing the original PowerPoint file, and you can insert graphics files and animation files as you progress.
- EMP Monitor
 Software that lists the current status of Epson projectors connected to
 the network, and monitors and controls those projectors. You can
 collectively manage multiple projectors by using EMP Monitor.

Installing

Make sure you check the following points before starting installation.

- If the computer you are using is running Windows XP, Vista, or 2000 you must be logged on as the Administrator when installing.
- Make sure that you close all running applications before beginning installation.
- Make sure you are using EMP NS Connection Version 2.4. If you are using an older version, it may not be able to connect to the projector correctly. Make sure you install EMP NS Connection Version 2.4 from the EPSON Projector Software for Meeting & Presentation CD-ROM supplied with your projector.

Procedure

For Windows

- Turn on your computer.
- Insert the EPSON Projector Software for Meeting & Presentation CD-ROM into the computer.

The installer starts automatically.

3 Click "Easy Install".

To select software and install it individually, select "Custom Install". To change the language in which the software is displayed, click "Select a language".

Check the applications to be installed, and then click "Install".



- When the License Agreement screen is displayed, click "Yes".
- When the "Add-Remove EPSON Virtual Display" screen is displayed, click "OK".

To use Multi-screen display you need to setup "EPSON Virtual Display". If you do not want to set it up now, you can do so later.

p.22

Click "Exit" to complete the installation.
Once selected, software such as "EMP SlideMaker2" and "EMP

Monitor" is installed sequentially.

For Macintosh

- 1 Turn on your computer.
- Insert the EPSON Projector Software for Meeting & Presentation CD-ROM into the computer.
- Double-click the "Installer for Mac OS X" icon in the "EPSON" window.

Installation starts.

4 Click "Finish" to complete the installation.



- When installation does not start automatically (Windows only) Select "Start" "Run", and then in the "Run" dialog box type the letter for your CD-ROM drive followed by ":\\EPsetup.exe" and then click "OK".
- Uninstalling

For Windows

Select "Start" - "Settings" - "Control Panel" - "Add-Remove Programs" or "Add or Remove Programs" and then remove "EMP NS Connection".

For Macintosh

From "Applications" delete the "EMP NS Connection" folder.



Connecting with EMP NS Connection

This section explains how to connect the computer and the projector via a network in Advanced connection mode, and the procedure for projecting images from your computer's screen with the projector.

| Overview of EMP NS Connection | 8 |
|---|----|
| • Two Connection Modes and their Main Functions | 8 |
| "Advanced connection mode" | 8 |
| "Quick connection mode" (Only when the optional | |
| wireless LAN unit is installed) | 8 |
| Main functions | 9 |
| • Steps for Connecting in Advanced Connection Mode. | 9 |
| Preparing to Connect | 10 |
| Preparing the Computer | 10 |
| For Windows | 10 |
| For Macintosh | 10 |
| Preparing the Projector | 10 |
| 1 0 | |

| Connecting to a Projector on a Network | | |
|--|----|--|
| and Projecting | | |
| Operating the Projector | 11 | |
| Operating the Computer | 11 | |
| Using the Connection Screen | 12 | |
| Using the Toolbar | 14 | |

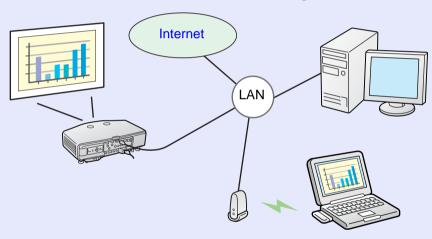
Overview of EMP NS Connection

There are two methods of connecting the projector and a computer via a network by using EMP NS Connection.

Two Connection Modes and their Main Functions

"Advanced Connection Mode"

"Advanced Connection Mode" is an infrastructure connection, and connects to an existing network system via a network cable. If you install the optional wireless LAN unit in the projector, you can connect to the network via a wireless LAN access point.

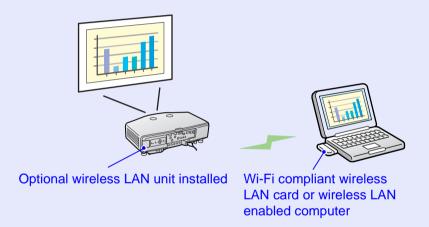


- From a conference room, you can open and project a file stored on a computer or file server in another room.
- You can use the Internet.
- You can monitor and control projector's on a network from the computer.

"Quick Connection Mode" (Only when the optional wireless LAN unit is installed)

"Quick Connection Mode" only runs when you install the optional wireless LAN unit in the projector.

"Quick Connection Mode" temporarily assigns the projector's SSID to a computer creating an ad hoc connection, and after disconnecting restores the computer's network settings.



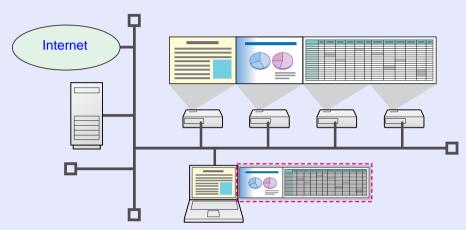
- You can easily connect to a computer and project images from the computer without making network settings.
- This lets you connect easily without a connector cable, and you can connect even if the projector and the computer are at remote locations.



Main functions

The following convenient functions let you make various meetings and presentations.

Multi-Screen Display p.21
 You can project different images from one computer to a maximum of four projectors, allowing you to project landscape images such as reports.



- Movie file transfer (Movie Sending Mode) p.19
 By using "Movie Sending Mode", a movie can be projected much smoother than when it is being sent from an application running on a PC. Because the audio is sent at the same time as the movie, you do not need to connect the computer and the projector with an audio cable.
- Presentation mode p.18
 This function can project PowerPoint slide shows running on a computer. You can give stylish presentations by projecting a black screen while making preparations or when not performing a slide show and so on.
- Distribution function

 The screen being displayed by a remote computer can be simultaneously displayed by up to four projectors with corresponding SSID.
- Switching function
 By using the meeting switching function, if EMP NS Connection is installed
 on all of the computers, the presenters can take turns and project their own
 images without changing cables.

Steps for Connecting in Advanced Connection Mode

Use the following steps to connect and project in EMP NS Connection Advanced connection mode.

In the following illustration, you only need to perform the light blue sections the first time you connect.

Install EMP NS Connection on the computer to be connected.
p.5



Make network settings on the computer and put it into network connection status

p.10

Normally, when a computer is connected with the network and used, you do not need to make computer network settings.



Make network settings on the projector and put it into network connection status p.10



Connect the projector to the network via a network cable

User's Guide "Connecting a LAN Cable"



Start EMP NS Connection on the computer and connect with the projector p.11

8

Preparing to Connect

Use the following steps to prepare the projector and computer for connection.

Preparing the Computer

For Windows

Make network settings for the computer by using the utility software supplied with the LAN adapter. For more information on the utility software, see the User's Guide supplied with your LAN adapter.

For Macintosh

Set the network port and communication status. For more details on setting the communication status, see the User's Guides for your computer or the AirPort card.

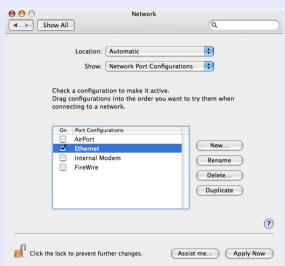
Procedure



Select "System Preferences" - "Network" from the Apple menu.

The network settings screen is displayed.





3 Close the screen.

Preparing the Projector

Procedure



Press the [Menu] button to display the configuration menu, and then make network settings.

For details on making network settings, see the projector's User's Guide. *User's Guide* "Network Menu (EB-G5350/G5150 only)"

Connecting to a Projector on a Network and Projecting



Before connecting, put the projector into connection standby status. Make sure the projector network settings are complete, and the projector is connected to network equipment such as a network hub via a commercially available network cable.

Procedure

- Press the [b] button on the remote control to turn the power on.

Press the [EasyMP] button on the remote control.

The EasyMP standby screen is displayed.



Operating the Computer

In the following explanations, unless otherwise noted, Windows screen images are used. You see the same screens even when using Macintosh.

Procedure



Start EMP NS Connection.

For Windows

Select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "EMP NS Connection".

For Macintosh

Double-click the "Applications" folder of the hard drive volume in which EMP NS Connection is installed, and then double-click the EMP NS Connection icon.



Select "Advanced Connection Mode" and then click "OK".

The projector search results are displayed. To always connect using "Advanced Connection Mode", select "Set the selected Connection Mode as the default mode for future connections".



Select the projector you want to connect to, and then click "Connect".

If the projector you want to connect to is not displayed in the search results, click the "Automatic search" button. The search takes about 30 seconds.

For details on the connection screen, see "Using the Connection Screen". p.12





When Projector Keyword is set to "On" from the projector, the keyword entry screen is displayed. Enter the keyword displayed on the EasyMP standby screen, and then click "OK".

When the connection is complete, the computer's screen is projected. The following EMP NS Connection toolbar is displayed on the computer screen. You can use this toolbar to operate the projector and make settings, and to disconnect the network connection.

For details on using the toolbar, see "Using the Toolbar".

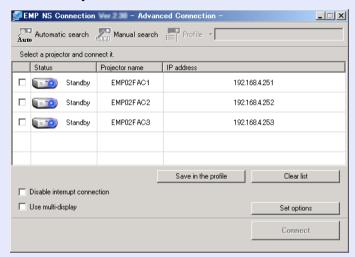
p.14



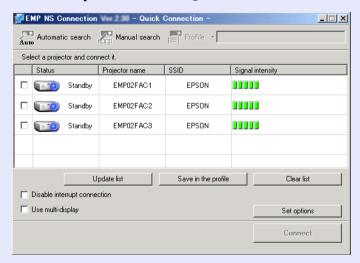
Using the Connection Screen

When EMP NS Connection starts, the following screen is displayed. The operation of each button or menu item is described in the following table.

When the system starts in "Advanced Connection Mode".



When the system starts in "Quick Connection Mode".







Automatic search

In "Advanced Connection Mode", you can search for available projectors on the network system that the computer is connected to.

In "Quick Connection Mode", you can search for the projector based on the SSID.



Manual search

In "Advanced Connection Mode", you can search for a projector based on a specified IP address or projector name.

In "Quick Connection Mode", you can search for the projector based on the SSID selected from a list.



Profile

You can search for a projector on the network using a profile saved with "Save in the profile". p.34

Status

The following six icons indicate the status of the discovered projectors.

| _ | • | - |
|---|-----|-----|
| | к | |
| | = 1 | = 1 |

Standby Selec

Select for connecting.



Busy Select for connecting. When you click

"Connect", the computer currently connected is disconnected and your computer is connected.



Busy (Disable interrupt connection)

Busy (Disable Cannot be selected. "Disable interrupt

connection" is set

on the other computer and it is already

connected.



Currently in use by another application

The projector's configuration menu is open. You can select it after closing the configuration menu and running the search again.

Searching Displayed while running "Manual search" or

"Profile".



Not found

Displayed when a projector cannot be found as a result of "Manual search" or "Profile".

| In "Quick Connection Mode", you can only select those | with the same |
|---|---------------|
| SSID. | |

Projector name

The projector's name is displayed.

IP address ("Advanced Connection Mode" only)

The projector's IP address is displayed.

SSID ("Quick Connection Mode" only)

The projector's SSID is displayed.

Display (When "Use multi-display" is selected)

Select the display number.
p.29

Update list ("Quick Connection Mode" only)

Updates "Status" and "Signal intensity".

Save in the profile

Saves the results of a search for projectors on the network as a profile.

p.34

Clear list

Deletes all search result lists.

Disable interrupt connection

Select this to prevent an interrupt connection by other computers while connected to the selected projector.

Use multi-display

Select this when using the Multi-screen display function. When this is selected, "Display layout" and "Display properties" are displayed at the bottom of the screen. p.21



Set options

You can make general setting options such as the processing method when EMP NS Connection starts. For optional settings, see p.40

Connect

Connect to the projector you selected from the search results list. When a connection is made with a projector, a toolbar is displayed.

Using the Toolbar

The toolbar is displayed on the computer screen after EMP NS Connection starts and a connection is made with the projector. You can use this toolbar to operate and make settings for the projector.



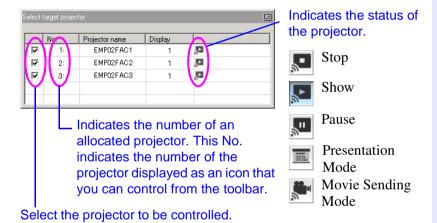


Select target projector

Click to limit the projector operated from the toolbar when projecting from multiple projectors using the distribution function or Multi-screen display. The indication below the icon shows that the projector can be controlled.

"ALL" indicates that all of the connected projectors can be controlled. For example, when "1, 3" is displayed, projectors No. 1 and No. 3 can be controlled.

Click to display the following screen.





Stop

Stops projection while connected to the projector. A black screen is projected while stopped. Audio does not stop. To stop the audio, or to display a user-registered logo while projection is stopped, use the A/V mute function.



Show

Releases stop or pause.



Pause

Pauses projected images while connecting to the projector. Audio does not stop.





Presentation Mode

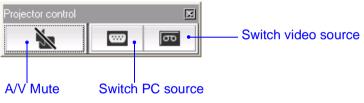
Each time this is clicked, Presentation mode switches between enabled/disabled. p.18



Projector control

While the projector is connected to the network, the projector's "A/V Mute", "Switch PC source" and "Switch video source" functions can be controlled from both the remote control and the projector's operating panel.

Click to display the following toolbar.





A/V Mute

The same function as the [A/V Mute] button on the remote control.

■ User's Guide "Remote Control"



Switch PC source

Click to change the input source in the order of Computer1 input port - Computer2 input port - BNC input port - EasyMP.



Switch video source

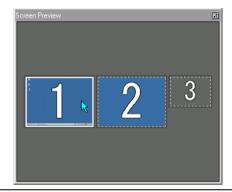
Click to change the input source in the order of S-video input port - Video1 input port - Video2 input port - HDMI input port. The S-video input port does not switch if the cable is not connected.



Screen Preview

Displays the multi-screen preview screen.

Clicking causes a preview of the display with the settings you have made to appear. Clicking each display causes each preview window to be enlarged to full-screen.





Set options



Movie Sending Mode

Used to immediately play back a movie file. p.19



Disconnect

Disconnects the connection to the projector.

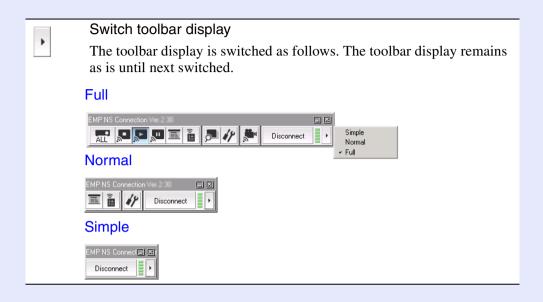


Signal intensity

This is displayed when the connection is made in the "Quick Connection Mode". As the signal strength increases, so does the number of lit indicators.

Connecting to a Projector on a Network and Projecting







Convenient EMP NS Connection Functions

This section explains those functions that may be useful during meetings or when making a presentation, such as the ability to send a movie file directly to a projector for playback ("Movie Sending Mode") or that which allows you to send images to multiple projectors from a single computer ("Multi-Screen Display").

| Projecting Only a PowerPoint Slide show (Presentation Mode) | 18 |
|---|----------------|
| Projecting Movies from a Computer (Movie Sending Mode) | 19 |
| Supported File Types | 1 |
| Playing back a movie | 1 |
| Using Multi-Screen Display | 2 ⁻ |

| • | Example of Adjusting the Virtual Display | 21 |
|---|--|----|
| • | Procedure before using the Multi-screen Display Function | 22 |
| • | Setting the Virtual Display | |
| | Enable the virtual display driver (Windows only) | |
| | Virtual display arrangement | 23 |
| • | Allocating the image to be projected | 28 |
| • | The allocated image is projected | 29 |

Projecting Only a PowerPoint Slide show (Presentation Mode)



In Presentation Mode, the images are only displayed when performing a PowerPoint Slide show on a computer. When you stop Slide show, the projector displays a black screen. This is useful when you only want to display the Slide show.

In addition to PowerPoint, Keynote is compatible with Presentation Mode with the Macintosh.

Procedure

- If necessary, select another projector to be controlled. p.14
- Click the button on the toolbar.

 Presentation Mode begins.
- When in Presentation Mode, click the button again to exit Presentation Mode.

Projecting Movies from a Computer (Movie Sending Mode)



In Movie Sending Mode, movie files can be sent directly to a projector. As a result, a movie can be projected much more smoother than when it is being sent from an application running on a PC.

Also, because the audio is sent at the same time as the movie, there is no need for an audio cable between the computer and the projector. You can set to play back selected multiple files repeatedly and in sequence.



- Movie Sending Mode is valid for one projector only. It is not possible to apply Movie Sending Mode to more than one projector.
- Depending on the communication method and the available reception, the image and sound may skip or stall.

Supported File Types

The file types supported by Movie Sending Mode are listed in the following table.

| File Type (Extension) | Movie Codec | Audio Codec | Recording Quality |
|--------------------------|----------------|---|--|
| .mpg* | MPEG2 | MPEG1 Layer1/2 Linear PCM and AC-3 audio cannot be played back. MPEG contents with no sound can be played back. | Highest frame rate: 30 fps Maximum resolution: 720 |
| .wmv .asf | WMV8 WMV9 | WMA | × 576 |

^{*} Files with the extension ".mpeg" cannot be projected.

Files to which DRM (Digital Rights Management) is applied cannot be projected.

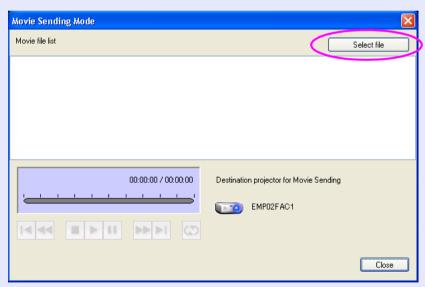
Playing back a movie

Procedure

- Click the button on the toolbar.
 The projector selection screen is displayed.
- Select the destination projector for Movie Sending and click "OK".

The "Movie Sending Mode" screen appears.

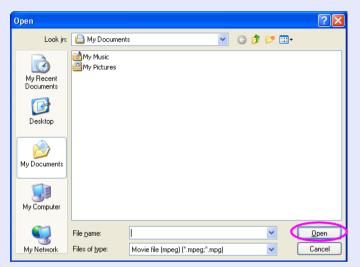
(3) Click "Select file".





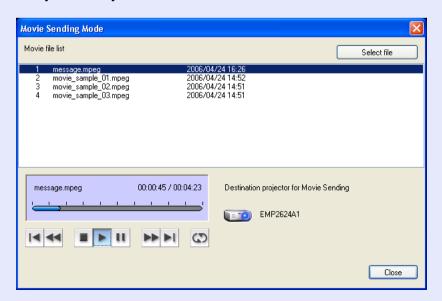


Select the movie file you want to play back and then click "Open".



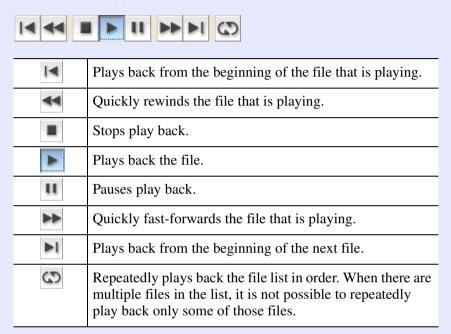
The "Movie Sending Mode" screen reappears. The selected files are displayed in the Movie Playback list.

If you perform "Select file" again, the Movie Playback list changes after you make your selection.





Use the operation buttons below to play and stop the movie files.





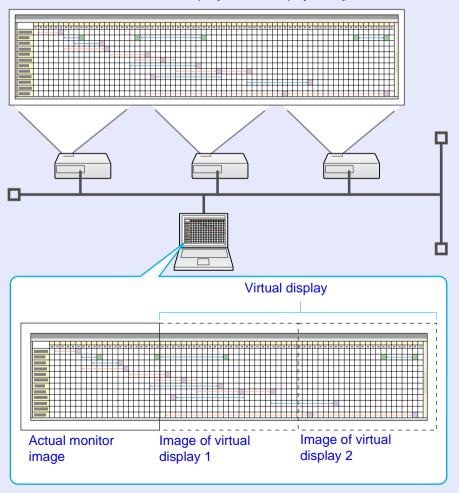
Click "Close" to end Movie Sending Mode.

Using Multi-Screen Display

Multi-screen display mode allows you to project different images from multiple projectors that are connected to a single computer.

With Windows, multiple <u>virtual displays</u> can be set in the computer, and each image can be projected by the projector. This function is not available with Windows Vista due to restrictions in the Windows Vista specifications.

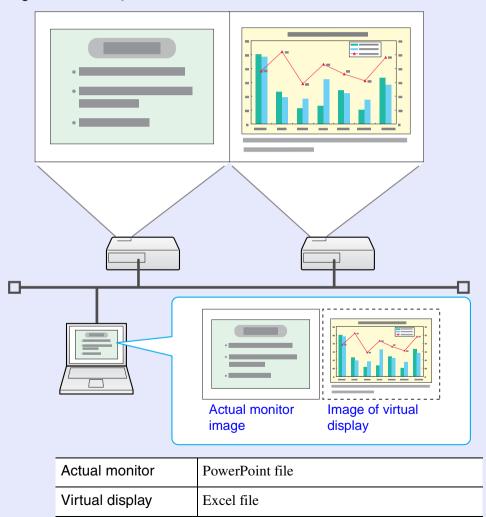
For the Macintosh, an external monitor must be connected to the computer to enable the use of the multi-screen display function. Whereas the above explanation has referred to "virtual display", in the case of the Macintosh, the operation relates to the screens displayed on the physically connected monitor.



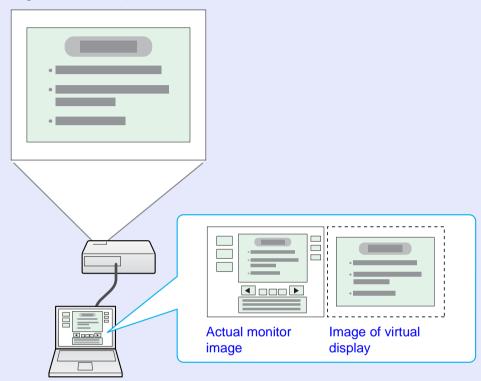
Example of Adjusting the Virtual Display

By arranging the <u>virtual display</u> allocation, you can project only the image that you want to show when making a presentation or project different images from left to right.

Arrangement example 1



Arrangement example 2



| Actual monitor | PowerPoint file presenter tools |
|-----------------|------------------------------------|
| Virtual display | Slide show using a PowerPoint file |

Procedure before using the Multi-screen Display Function

1. Setting the Virtual Display p.22



In a Windows environment, enable the <u>virtual display</u> driver as necessary. And, for both Windows and the Macintosh, set up the virtual display arrangement.

2. Allocating the image to be projected **p.28**

Open the file to be projected, and then move the screen to the virtual display according to the actual projection arrangement.



3. The Allocated Image is Projected p.29

Allocate a virtual display number to a projector that is connected through the network, and then start projection.

Setting the Virtual Display

The following explains how to allocate the computer image using 21 page "Arrangement example 1".

■ Enable the virtual display driver (Windows only)

Enable the <u>virtual display driver</u>. Those users listed below do not have to perform this operation. Perform the "Virtual display arrangement" (Windows), or "Virtual display arrangement" (Macintosh). • p.23

- Those users who have enabled virtual displays installing EMP NS Connection.
- Those users who are using Macintosh computers.



Procedure



Start Windows on the computer, then select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "Add-Remove EPSON Virtual Display".

The "Add-Remove EPSON Virtual Display" screen is displayed.



Select the virtual display you want to use.

Up to four monitors can be added. In this case, a single virtual display is to be used, so select one. When, for example, using three projectors, such that you have to set multiple virtual displays, only select as many displays as is necessary.

Any one of the displays can be selected.



Click "OK".



When you click "OK", the drivers for the virtual display are enabled. At this point, it is normal for the display to flicker. Wait for the "Add-Remove EPSON Virtual Display" screen to close.

Virtual display arrangement

After starting EMP NS Connection, the setting up of the virtual displays varies between Windows and the Macintosh. The procedures are explained separately, below.

For Windows, follow the procedure below.

For the Macintosh, go to p.26.



Check the following points before starting EMP NS Connection when connecting via wireless LAN. If the following points are not set correctly, Multi-screen display cannot be used.

- The SSID for the computer and each projector must be the same.
- The wireless LAN system for the computer and each projector's wireless LAN card must be the same. You can modify the SSID and wireless LAN system for the projector from the "Network" menu in the projector's configuration menu. User's Guide "Wireless LAN menu (only when the optional wireless LAN unit is installed)"

Procedure

For Windows

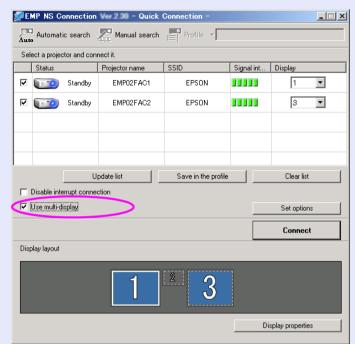


Select "Start" - "Programs" (or "All Programs")
"EPSON Projector" - "EMP NS Connection".
EMP NS Connection starts.





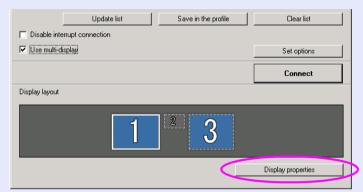
Select the "Use multi-display" check box.



"Display layout" and "Display properties" are added at the bottom of the screen.



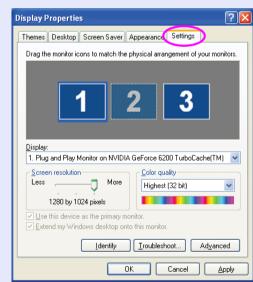
Click "Display properties".



The "Display properties" screen will be displayed.



Click the "Settings" tab.







Drag the displayed monitor icon and place it where desired.

Here, the actual monitor (1) is placed on the left, while the virtual monitor (3) is placed on the right.

When the PC has multiple display output terminals, the numbers assigned to the virtual terminals will be sequential to those of the physical terminals.





- When an external monitor is connected as a secondary monitor, the image for that screen cannot be projected.
- Depending on the hardware, the number of the secondary monitor may be other than "2". When the monitor icon is displayed on the screen, click the icon and confirm that the monitor type shown under "Display" is other than "secondary".

When the monitor icon appears as follows, a virtual display is connected.





Click the "OK" button. The "Display properties" screen closes.

Up to this point, the virtual display layout has been fixed. Go to p.28.



For Macintosh



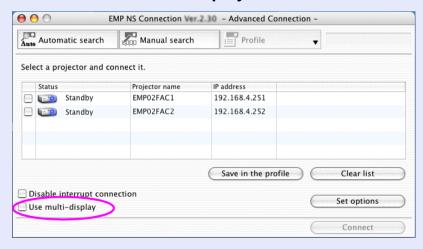
Start EMP NS Connection.

Double-click the "Applications" folder of the hard drive volume in which EMP NS Connection is installed, and then double-click the EMP NS Connection icon. EMP NS Connection starts.

Select "Advanced Connection Mode" and then perform startup. The "Advanced Connection Mode" screen is displayed.



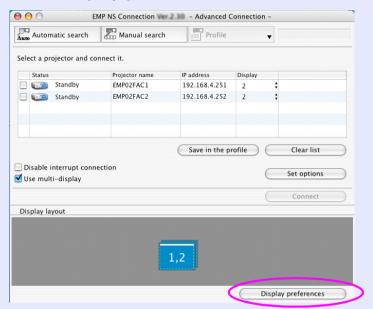
Select the "Use multi-display" check box.



"Display layout" and "Display properties" are added at the bottom of the screen.



Click "Display preferences".

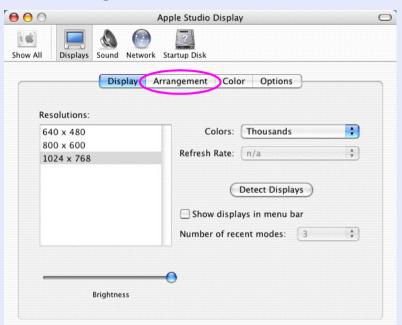


The display setting screen is displayed.



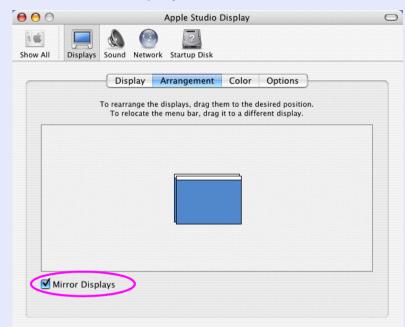


Click "Arrangement".





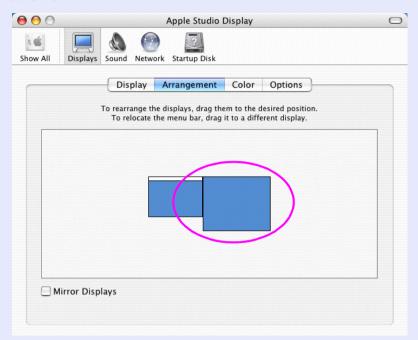
Clear "Mirror Displays".







Drag the displayed monitor icon and place it where desired.





Close the display setting screen.

Up to this point, the screen layout has been fixed.

Allocating the image to be projected

The following explains how to allocate the computer image using 21 page "Arrangement example 1".

Procedure



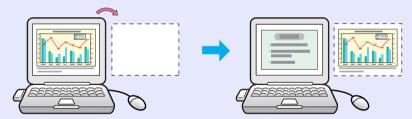
Open the file to be projected.

Start the PowerPoint and Excel files.



Drag the window to the desired <u>virtual display</u> monitor, and allocate it where the image is to be projected.

Drag the Excel window to the right until it cannot be seen. As a result, the PowerPoint window appears on the actual monitor, while the Excel window appears on the virtual display on the right.





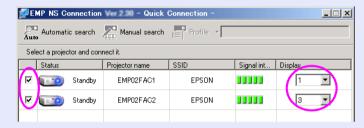
The allocated image is projected

The following explains how to allocate the computer image using 21 page "Arrangement example 1".

Procedure

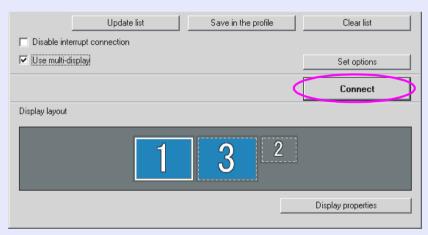
1

Select the number of the <u>virtual display</u> to allocate to "Display", and set which image to be projected from which projector.



2

Click "Connect".



The image allocated to each projector is projected.



In a Windows environment, you cannot view the image being sent to a virtual display on the computer. To adjust the image on the virtual display, you must do so while viewing the projected image. To perform mouse-based operations on the virtual display, move the mouse pointer in the direction of the virtual display, such that the pointer appears on the virtual display.





To terminate multi-screen display, click "Disconnect" on the toolbar.



• In a Windows environment, if the virtual display driver has been enabled such that the mouse pointer can be moved outside the limits of the screen, there may be occasions when you lose track of the location of the pointer. When you are not using a virtual display, clear the check mark against the under "Add-Remove EPSON Virtual Display", such that the mouse pointer cannot be moved outside the limits of the screen. To subsequently use multi-screen display again, again place a check mark against the required display under "Add-Remove EPSON Virtual Display".

To clear a check mark, see the following. p.22

• You can adjust each projector's color tone.

✓ User's Guide "Correcting Color for Multiple Projectors (Multi-Screen Color Adjustment)"



Connecting to a Projector on a Different Sub-net

This chapter explains how to connect a computer to a projector on a different sub-net via a wired LAN or a wireless LAN access point on an existing network system.

| Connecting to a Projector on a Different Sub-net | 32 |
|---|----|
| Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only) | 33 |
| Performing a search with a profile | 34 |
| Making a Profile | 34 |
| Searching by Specifying a Profile | |
| Managing a Profile | |

Connecting to a Projector on a Different Sub-net



By default, this application only searches for projectors on the same sub-net as the computer. Therefore, even if you perform a search for projectors on the network, one on a different sub-net will not be found. You can, however, identify and connect to a projector on a different sub-net, as follows.

- Specify either an IP address or projector name and perform a search.
- The IP address can be input directly. Also, provided the name of the connected server has been registered on the DNS server, you perform a search simply by inputting that name. p.33
- Performing a search based on a profile.
 Once you have performed a search for a projector on a different subnet by specifying either an IP address or a projector name, you can save the search as a profile with an easy-to-remember name, and then use that profile whenever you subsequently want to search for a projector on a different sub-net.



If a search fails to find a projector, the most likely causes are as follows. Proceed as appropriate, depending on the cause of the failure.

For both Windows and the Macintosh

• The wireless LAN signal is either out of range or weak. Check whether there is anything that could be interfering with the signal.

When the optional wireless LAN unit is installed in the projector, and the Macintosh is connected to a wireless LAN

• "AirPort: On" is not set, or an appropriate access point is not selected.

Check whether AirPort is set to "On". Or, check whether an appropriate access has been selected.

Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only)



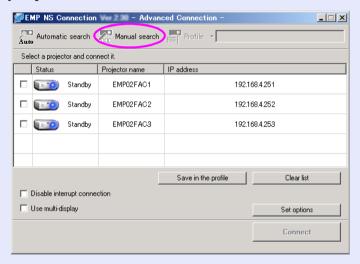
In the following explanations, unless otherwise noted, Windows screen shots are used.

You see a similar screen even when using Macintosh.

Procedure

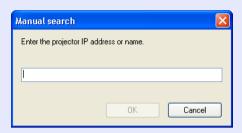


Click "Manual search" on the EMP NS Connection projector selection screen.





Enter the IP address or the projector name for the projector you want to connect to, and click "OK".



The search results are displayed on the EMP NS Connection projector selection screen.

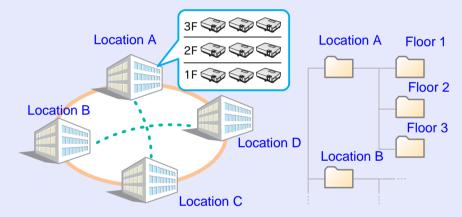
Provided the target projector has been identified, select that projector, and then click "Connect" to establish a connection. When you will always be using that projector, save the search as a profile, such that you do not have to specify the relevant details every time you perform a search. • p.34



When you use "Manual search" in "Quick Connection Mode", you can specify the SSID. When there are a lot of projectors you can narrow the search field by using SSID.

Performing a search with a profile

You can save a search for a frequently used projector as a profile. A "profile" is a file containing all of the information pertaining to a given projector, such as the projector name, its IP address, and SSID, By specifying that profile whenever you subsequently perform a search. the search will be performed using the saved IP address and projector name. For example, by creating a group of profiles for each place where a projector is setup and managing them with folders, the target projector can be found quickly.



This section explains how to create and edit a profile.

Making a Profile

Profiles are made by saving searched results.

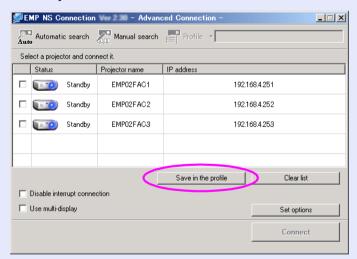
For details on how to edit a previously saved profile, see "Managing a Profile". p.37

For details on how to locate a projector on a different sub-net, see "Searching by Specifying the IP Address and Projector Name (For "Advanced Connection Mode" only)". p.33

Procedure



When the projector is displayed on the EMP NS Connection projector selection screen, click "Save in the profile".



The "Save in the profile" screen is displayed.





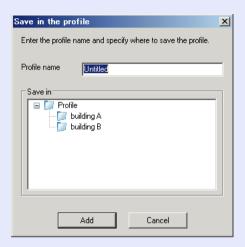
Enter a profile name and then click "Add".



Projector information is registered in the profile.

If you have previously saved a profile, you are prompted to confirm whether that profile can be overwritten. To save a profile with a different name, select "Save as". If you have created a folder for a profile, the following screens are displayed. After entering the profile name and selecting the save destination, click "Add".

For Windows



For Macintosh





For details on how to create a folder for a profile, see "Managing a Profile". p.37



Searching by Specifying a Profile

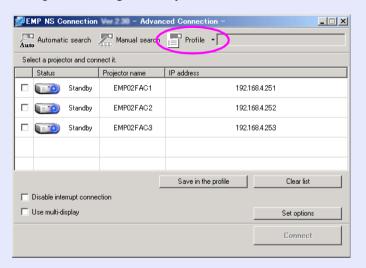
You can search by specifying the profile you created.

Procedure



Click "Profile" on the EMP NS Connection projector selection screen.

If no profile is registered, you cannot select "Profile".





From the menu that is displayed, select the projector you want to connect to.



The search results are displayed on the EMP NS Connection projector selection screen.

Assuming that the desired projector has been found by the search, select that projector and then click "Connect" to establish a connection.



37

Managing a Profile

You can change the name and the hierarchical structure of the profile.

Procedure

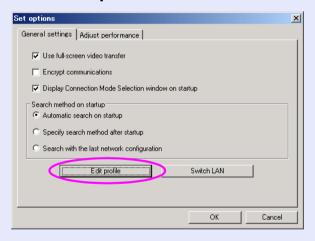


Click "Set options" on the EMP NS Connection's main screen.

The "Set options" screen is displayed.



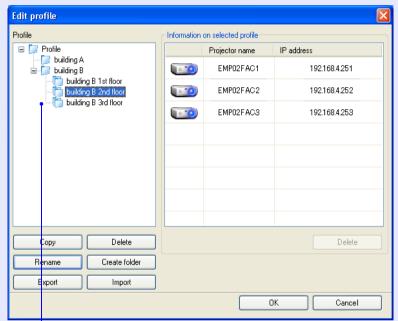
Click "Edit profile".



The "Edit profile" screen is displayed.



Edit the contents registered in the profile.



: Indicates a folder.

: Indicates a profile.

| Profile | | | |
|------------------------------|---|--|--|
| Item | Function | | |
| Profile | You can display the registered profile. You can manage it by creating a folder. You can change the order of the profile or the folder by dragging & dropping. | | |
| Сору | You can copy the profile. The copied profile is saved in the same folder as the original with the same name. | | |
| Delete | You can delete the profile and the folder. | | |
| Rename | You can display the rename dialog box and rename the folder or the profile. You can enter up to 32 characters in the rename dialog box. | | |
| Create folder | You can create a new folder. | | |
| Export | You can export a profile, as well as import and use a profile. | | |
| Import | Used when you want to want to read and use an exported profile. | | |
| Ir | formation on selected profile | | |
| Item | Function | | |
| Projector name IP address | You can display the projector information registered in the profile. | | |
| Delete | You can delete the information for the selected projector. When all projector information is deleted, the profile is also deleted. | | |



Click "OK".

Saves your edits and closes the "Edit profile" screen.



Setting the EMP NS Connection Operation

You can make general setting options such as the processing method when EMP NS Connection starts.

| Using Set Options | 40 |
|------------------------|----|
| General settings Tab | |
| Adjust Performance Tab | |

Using Set Options

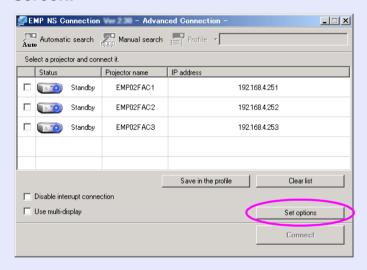
You can make general setting options such as the processing method when EMP NS Connection starts.

Call the option settings from the EMP NS Connection's main screen.

Procedure



Click "Set options" on the EMP NS Connection main screen.



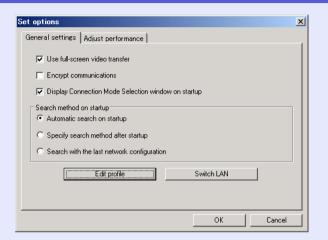
The "Set options" screen is displayed.



Set each of the items.

Confirm the details of the set items in the next step. When you have made all the necessary settings, click "OK" to close the "Set options" screen.

General settings Tab



| Use full-screen video transfer | Windows only (excluding Windows Vista) Select this check box when you want to display Windows Media Player in full screen. However, clear this check box if the movie does not playback smoothly. |
|---|--|
| Encrypt communications | Select to encode and transmit data. Even if data is intercepted, it cannot be deciphered. When using "Quick Connection Mode", make sure you always select this check box. |
| Display Connection Mode Selection window on startup | Set whether or not the "Quick Connection Mode"/ "Advanced Connection Mode" screen is displayed when EMP NS Connection starts. Clear this check box once you have settled on a regular startup method. |
| Search method on startup | Sets from the following the projector search method that is executed when EMP NS Connection is started. "Automatic search on startup" "Specify search method after startup" Search with the last network configuration" |

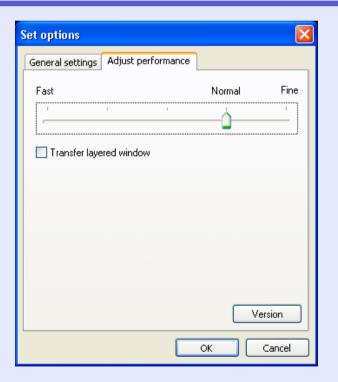


| Edit profile | The "Edit profile" dialog box is displayed. p.37 | | |
|--------------|---|--|--|
| Switch LAN | Windows only The Switch Network Adapter dialog box is displayed. This is used when it is necessary to switch the network adapter to be used for a search when a computer has multiple adapters. By default, all of the network adapters are used to perform a search. When a wired LAN is always used as the connection method, select a wired LAN adapter. | | |

| adjustment slider | "Fine". Set to "Fast" when movie projections are interrupted. |
|-------------------------|---|
| Transfer layered window | Windows only Set whether or not to transfer a layered window. The layered window is in use when contents such as messages displayed on the computer are not projected by the projector. Select this check box to project contents such as messages that use the layered window. |

The performance can be set to "Fast", "Normal", and

Adjust Performance Tab





Performance

When you click on the toolbar, only the Adjust performance tab is displayed.



Using a Computer to Set Up, Monitor and Control Projectors

This chapter describes how to use a computer that is connected to the network to change projector settings and to control the projector.

| Changing Settings Using a Web Browser | 45 |
|---|----|
| (Web Control) | |
| Displaying Web Control | 43 |
| Entering the IP address of the projector | 43 |
| Projector Setup | |
| Items in the configuration menu that cannot be set by the web browser | |
| Using the Mail Notification Function to Repo | |
| Problems | 44 |
| Management Using SNMP | 45 |
| | |

Changing Settings Using a Web Browser (Web Control)



You can set up and control the projector from a computer by using the Web browser of a computer that is connected to the projector via a network. Setup and control operations can be performed remotely if this function is used. In addition, since you can use the computers keyboard, entering characters required for the setup is easier. Use Microsoft Internet Explorer 6.0 or later as the Web browser. If using a Macintosh, you can also use Safari.

If, however, you are using Safari under Macintosh 10.2.8, some of the Web control radio buttons may not display properly.



Setup and control with a Web browser are possible if set to "Network On" from the "Extended" menu of the projector's configuration menu, even if the projector is in standby mode (when the power is off).

Displaying Web Control

Display Web control with the following procedure.



If your Web browser is set up to connect via a proxy server, Web control cannot be displayed. To use the Web control, you need to make network connection settings with other than a proxy server.

Entering the IP address of the projector

Web control can be opened by specifying the IP address of the projector as follows when using "Advanced Connection Mode".

Procedure



Start the Web browser on the computer.



Enter the IP address of the projector in the address input box of the Web browser, and press the [Enter] key on the computer's keyboard.

Web Control is displayed.

When "Web Control Password" is set in the "Network" menu from the projector's configuration menu, enter the "User name" and "Password". Enter "EPSONWEB" as the "User name".

Projector Setup

You can set items that are usually set in the projector's configuration menu. The contents set are reflected in the configuration menu.

Items in the configuration menu that cannot be set by the web browser

All items in the configuration menu can be set with the exception of the following items.

- "Signal" "HDMI Video Range"
- "Settings" "Keystone" "Quick Corner"
- "Settings" "Pointer Shape"
- "Settings" "User Button"
- Registering a user's logo using "Extended" "User's Logo"
- "Extended" "Operation" "High Altitude Mode" and "BNC Sync Termination"
- "Extended" "Language"
- "Reset" "Reset All", "Reset Lamp Hours"

The items available on each menu are the same as the configuration menu of the projector.

■ User's Guide "List of Functions", Network Menu (EB-G5350/G5150) only) The "MAC Address" is not displayed.

Using the Mail Notification Function to Report Problems



By setting the Mail Notification function from the projector's configuration menu, notification messages will be sent to the preset e-mail addresses when a problem or warning occurs with a projector. This will enable the operator to be notified of problems with projectors even at locations away from the projectors.

■ User's Guide "Network Menu (EB-G5350/G5150 only)", "Mail menu"



- Up to a maximum of three notification destinations (addresses) can be recorded, and notification messages can be sent to all three destinations at once.
- If a projector develops a critical problem and suddenly stops working, it may not be able to send a message notifying an operator of the problem.
- You can monitor projectors if set to "Network On" from the "Extended" menu of the projector's configuration menu, even if the projector is in standby mode (when the power is off).

Management Using SNMP

By setting SNMP from the projector's configuration menu, notification messages are sent to preset e-mail addresses when a problem or warning occurs with a projector. This is useful when controlling projectors centrally at a point distant from them.

User's Guide "Network Menu (EB-G5350/G5150 only)", "Others menu"



- SNMP should be managed by a network administrator or someone who is familiar with the network.
- The SNMP function to monitor the projector requires SNMP Manager to be installed on the computer.
- The managing function using SNMP cannot be used via a wireless LAN in the "Quick Connection Mode".
- Up to two destination IP addresses can be saved.



Presentations Using PC Free

This chapter explains how to project image and movie files stored on USB devices and SD cards, and scenarios made with EMP SlideMaker2, directly using PC Free.

| Files that can be Projected Using PC Free, and Saving | 47 |
|--|----|
| Specifications for Files that can be Projected Using PC Free | 47 |
| Copying or Deleting SD Card Files over the Network | 48 |
| PC Free Examples | 50 |
| Projecting images and movies stored on a USB storage device Projecting a PowerPoint slide show without connecting to a computer | |
| PC Free Basic Operations | |
| Starting and Closing PC Free | 51 |
| Starting PC Free | 51 |
| Closing PC Free | 53 |
| PC Free Basic Operations | 54 |

| Rotating the Image | 55 |
|--|----|
| Projecting Scenarios | 56 |
| Creating and Editing a Scenario | 56 |
| Basic scenario editing | 56 |
| Playing a Scenario | 57 |
| Operating During a Presentation | 57 |
| Projecting image and movie files | 58 |
| Projecting Images/Movies | 58 |
| Projecting all Image and Movie Files in a Folder in Sequence (Slide show) | 59 |
| Setting Image and Movie File Display Conditions and Operation Mode | 60 |

Files that can be Projected Using PC Free, and Saving



You can use PC Free to directly project files stored in digital cameras, USB storage devices and SD cards that are connected to the projector. By leaving an SD card inserted into the slot in the projector, you can use the network to copy and delete files on that card. p.48



USB storage devices that incorporate security functions sometimes cannot be used.

Specifications for Files that can be Projected Using PC Free

| Туре | File Type (Extension) | Notes | |
|------------------|--------------------------|---|--|
| Scenario file | .sit | These are scenario files created using SlideMaker2. To create scenarios, see p.56 You can also play audio (.wav) files set as BGM at the time of scenario creation. You can also project scenarios created for other projectors using the EMP SlideMaker supplied. | |
| Image | .bmp | Cannot project images with a resolution greater than 1024 × 768. | |
| | .gif | Cannot project images with a resolution greater than 1024×768 . | |
| .jpg | | The following cannot be projected. • CMYK color mode formats • Progressive formats • Images with a resolution greater than 4608 × 3072 • Files that exceed 12 MB. • Files with the extension ".jpeg" Normally, jpeg images may not be projected clearly if compression is set too high. | |

| Туре | File Type (Extension) | Notes | |
|-------------|--------------------------|---|--|
| | .png | Cannot project images with a resolution greater than 1024×768 . | |
| <u>DPOF</u> | .mrk | For DPOF version 1.10, only files named AUTPLAYx.mrk (where x is a number between 0 to 9) can be projected. | |

Supported movie files

| File Type (Extension) | Movie Codec | Audio Codec | Recording Quality |
|-----------------------|------------------------|---|------------------------------------|
| .mpg* | MPEG2 | MPEG1 Layer1/2 Linear PCM and AC-3 audio cannot be played back. MPEG contents with no sound can be played back. | Highest frame rate: 30 fps Maximum |
| .mp4* | MPEG4 ASP MPEG-4AVC | MPEG4 AAC-LC | resolution: 720×576 |
| .wmv .asf | WMV8 WMV9 | WMA | |

^{*} Files with the extension ".mpeg" cannot be projected.



- Files to which DRM (Digital Rights Management) is applied cannot be projected.
- If you use a USB storage device with a slow access speed when playing back movies and scenarios with BGM (when transmitting at higher bit rates), the movie files may not play back correctly or the sound may skip or not be output.
- When using a USB hard disk, we recommend using an AC adapter power supply.
- The projector does not support media formatted on some file systems. If you have trouble with projecting, use media formatted under Windows.
- Format the media using the FAT16/32 file system.



Copying or Deleting SD Card Files over the Network

You can copy and delete files on an SD card inserted in the projector from your computer over the network. This is useful since it lets you operate an SD card without removing it from the projector even if the projector is mounted on the ceiling or in a remote location. You can operate one projector with one computer. You cannot copy or delete files on a USB storage device.



If the write protection switch on the SD card is set to readonly, you cannot copy or delete files. In this case, release write protection.

Procedure

To perform file operations on an SD card, make sure the EasyMP standby screen (p.51) is displayed.

For Windows



On your computer, go to "My Computer" and then open "Map Network Drive".

For "Drive", enter a drive name that is not being used. For "Folder", enter \\Projector IP address\share, then click "Finish".



The share folder is displayed.

When the Share folder is double-clicked, the following screen is displayed. When "network drive password" is set in the "Network" menu from the projector's configuration menu, enter the "User name" and "Password", and then click "OK". Enter "EPSONDRV" as the "User name".



4 Copy the target folder(s) or file(s) to the SD card.



For Macintosh

- (1) Click the "Finder" icon.
- From the "Transfer" menu, select "Connect to Server".
- In the address field of the "Connect to Server" dialog, enter "smb://Projector IP address/share".



4 Click "Connect".



When a "Web Control Password" is set, a dialog box is displayed. Enter your user name and "Web Control Password" and then connect to the projector.



PC Free Examples

Projecting images and movies stored on a USB storage device

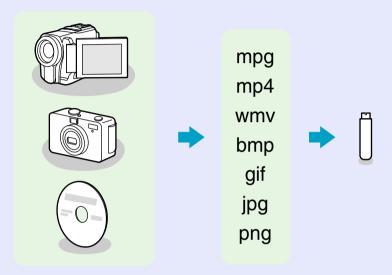


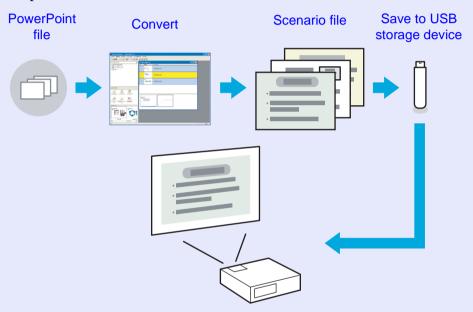
Image and movie files can be played back using either of the following two methods. By using PC Free, projected movie images look much smoother than those projected by playing back using other applications on a computer.

Example 1: Prepare multiple images and project them continuously (Slide show) p.59

Example 2: Select image files and movie files one at a time and project it p.58

Projecting a PowerPoint slide show without connecting to a computer

You can use EMP SlideMaker2 to convert your PowerPoint file into scenario format. By storing this scenario file on a USB storage device or an SD card, you can project a PowerPoint slide show without connecting a computer.



The playback method for the file to be projected can be set as follows at conversion.

Example 1: Convert a PowerPoint file into a scenario and project it

"Turning a PowerPoint File into a Scenario" p.64

"Projecting Scenarios" p.56

Example 2: Set scenario to automatic playback (autorun)

"Sending Scenarios" p.75

Example 3: Project scenario with BGM p.67

PC Free Basic Operations



PC Free lets you play back and project scenarios, image files, and movie files in USB storage devices and SD cards, and image files in digital cameras.

This section explains the basic operation of PC Free.

Because the remote control is used to perform all of the following steps, button names indicate remote control buttons.

Starting and Closing PC Free

Starting PC Free

Procedure



Connect one of the following devices to the projector.

- Digital Cameras or USB Storage Device User's Guide
 "Connecting and Removing USB Devices (EB-G5350/G5150
 only)"
- USB MultiCard Reader (when a memory card is inserted)
 User's Guide "Connecting and Removing USB Devices (EB-G5350/G5150 only)"



Press the [EasyMP] button. The EasyMP standby screen is displayed.

USB storage devices and SD card icons are displayed on the standby screen.







Tilt the [♠] button to move the cursor to the icon for the projection target, and then press the [Enter] button.

PC Free starts and displays the contents of the USB storage device or SD card.



JPEG files and MPEG files are displayed as thumbnails (file contents are displayed as small images). Other files or folders are displayed as icons as shown in the following table.

| Icon | File Type | lcon | File Type |
|------|-----------------------|------|-----------------------------|
| DPOF | Digital camera format | JPEG | JPEG file |
| MPEG | MPEG file | PNG | PNG file |
| WMV | WMV files | PFX | Electronic certificate file |
| ВМР | BMP file | CER | |
| GIF | GIF file | | |





- When autorun is set for a scenario, it is automatically played back with the highest priority over other input sources. If you want to stop it from playing back, press the [Esc] button on the remote control. p.75
- When a USB multi-card reader is connected to the projector, the following USB icons are displayed, and slots in which a card is inserted are displayed with a blue icon.



• Some JPEG files may be displayed as icons instead of thumbnails. In this event, a file icon is displayed.

Closing PC Free

Procedure



Tilt the [o] button up to position the cursor on "Exit".



Press [Enter].

PC Free shuts down and the EasyMP standby screen is displayed.

After turning off the power supply to the digital camera or the USB storage device, disconnect it from the projector.

> When removing an SD card, check the status of the access indicator at the card slot before removing the card.



If you leave the USB storage device connected when you close PC Free and the EasyMP standby screen is displayed, disconnect the USB storage device and reconnect it before starting PC Free again.



PC Free Basic Operations

The following describes the procedures for playing images, movies, and scenarios, using PC Free, and projection operations.

Procedure



Tilt the [♠] button to position the cursor on the file or folder you want to access.





If all files and folders cannot be displayed at the same time in the current window, press the [1] button or move the cursor to the "Next page" button and press the [Enter] button.

To return to the previous screen, press the [+] button, or position the cursor on the "Previous page" button and press the [Enter] button.



Press [Enter].

The selected image is displayed.

When a folder is selected, the files in the selected folder are displayed. Select "Back to Top" on the screen that opened and press the [Enter] button to return to the previous screen.

Rotating the Image

You can rotate JPEG images in 90 increments when playing them with PC Free. The rotating function is also available during the Slide show. Rotate JPEG images in the following way.

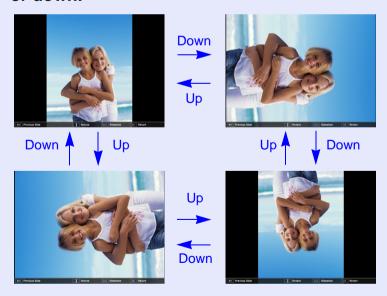
Procedure



Play images or scenarios in JPEG format, or perform a slide show.

To play JPEG images p.58
To play scenarios p.57
To play slide shows p.59

While projecting a JPEG image, tilt the [♦] button up or down.



Projecting Scenarios

This section describes the method for playing scenarios stored in a USB storage device or an SD card, and the operations during scenario playback.

Because the remote control is used to perform all of the following steps, button names indicate remote control buttons.

Creating and Editing a Scenario

Create the scenario beforehand by using EMP SlideMaker2, and then transfer it to the SD card or USB storage device in the projector by using the "Send Scenario" function. p.75



While transferring the scenario you can set autorun and continuous play. p.75

Basic scenario editing

For a scenario stored on a USB storage device or an SD card, it is possible to change the order in which images are projected, or set display/nondisplay of the individual images.

Procedure



Tilt the [] button to move the cursor to the icon for the scenario to be edited, and then press the [Esc] button.



Select "Edit Scenario" from the menu displayed, then press the [Enter] button.



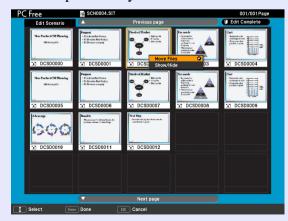
Position the cursor to the desired slide, and then press the [Esc] button.

The sub menu is displayed.

Select "Move Files" to change the order of the slides, and "Show/ Hide" to show or to hide files, then press the [Enter] button.

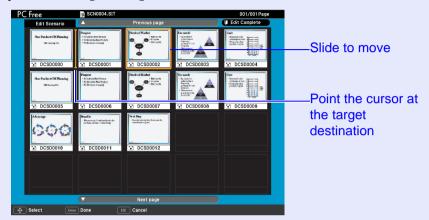
Go to step 4 when you select "Move Files".

Go to step 5 when you select "Show/Hide".



4

Move the cursor to the desired position, and then press the [Enter] button.





Once you have completed editing, tilt the [⋄] button up to position the cursor to the "Edit Complete" button, and then press [Enter].

The edited content can only be accessed while the SD card or USB storage device is inserted into the projector.

Playing a Scenario

Procedure



Start PC Free. p.51

The content of the connected digital camera, USB storage device or SD card is displayed.

- Tilt the [⋄] button to position the cursor on the target scenario folder.
- 3 Press [Enter].
 Starts playback.



If "Advance" is set to "Automatically after", once play has reached the end, it returns to the file list screen. If "Revive" is selected, the scenario is repeated from the beginning.

See "Operating During a Presentation" for how to operate the scenario when "Advance" is set to "On mouse click", and how to stop and cancel.



- You can rotate JPEG format images in the scenario while they are being projected. p.55
- The movie files that are included in scenarios can be fastforwarded, rewound and paused during playback.
 p.59
- The slide changing time for scenarios can be set using the "Advance" command in EMP SlideMaker2.

 p.79

Operating During a Presentation

The following operations using the remote control are possible while playing a scenario.

| Screen Switching | Proceed to the next screen by pressing [Enter] or []. Return to the previous screen by pressing []. |
|---------------------|---|
| Stopping Playing | The message "Do you want to quit playing the scenario?" is displayed when you press the [Esc] button. Close by selecting "Exit" and pressing the [Enter] button. Continue playback by selecting "Return" and pressing the [Enter] button. |

The following functions of the projector can be used when projecting a scenario or image file with PC Free.

• Freeze

• A/V Mute

• E-Zoom

For details on the various functions User's Guide "Freezing the Image (Freeze)""Hiding the Image and Sound Temporarily (A/V Mute)" "Enlarging Part of the Image (E-Zoom)"

Projecting image and movie files

Image files from a digital camera and image files and movie files stored on a USB storage device or SD card can be projected using PC Free by either of the following two methods.

- Projecting selected image and movie files This is a function for projecting single files.
- Projecting all Image and Movie Files in a Folder in sequence (slide show)

This is a function for projecting the file contents of a folder in order, one file at a time.

Attention

The USB storage device is accessed frequently when playing back movie files. Do not disconnect the USB storage device at this time. PC Free may not operate correctly.

Because the remote control is used to perform all of the following steps, button names indicate remote control buttons.

Projecting Images/Movies

Procedure



Start PC Free. p.51

The content of the connected digital camera, USB storage device or SD card is displayed.



Tilt the [o] button to position the cursor on the image file or movie file to be projected.





Press [Enter].

The image or movie starts to play back.





The following operations return you to the file list.

- While projecting still images: Press the [Esc] button.
- While projecting movies: Press the [Esc] button. On the screen that is displayed, select "Exit", and then press the [Enter] button.





- JPEG format images can be rotated during projection.

 p.55
- You can make the following operations using the remote control while playing movie files.

 Fast-forward: Tilt the [♥] button to the right Rewind: Tilt the [♥] button to the left Freeze (Pause): Tilt the [♥] button down Three fast-forward/rewind speeds are available, and the speed changes each time the button is pressed. To return to normal playback, press the [Enter] button. Audio is not output while fast-forwarding, rewinding, or pausing is in progress.

Projecting all Image and Movie Files in a Folder in Sequence (Slide show)

You can project the image and movie files in a folder in sequence, one at a time. This function is called Slideshow. Perform the Slide show by the following procedure.



You can set display conditions, such as projecting repeatedly and adding effects to the display when files are being switched. To change the movie files and image files automatically when you run Slide show, set the screen switching time in the PC Free option menu to anything other than "No". Default setting: "No" p.60

Procedure



Start PC Free. p.51

The content of the connected digital camera, USB storage device or SD card is displayed.

- Tilt the [⋄] button to move the cursor to the folder containing the slide show, then press the [Enter] button.
- Select "Slideshow" in the bottom right corner of the screen, and then press the [Enter] button.

The Slide show starts.

When the last file is projected, the file list is displayed again automatically. If you set "Continuous Play" to "On" in the Options window, projection will start from the beginning again when the end is reached. \bigcirc p.60

Just as with a scenario, you can proceed to the next screen, return to the previous screen, or stop playback during projection of a Slide show. Toperating During a Presentation p.57



If the screen switching time setting has been set to "No", the files will not change automatically when you run a Slide show. Press the [Enter] or [😉] button on the remote control to continue to the next file.

Setting Image and Movie File Display Conditions and Operation Mode



You can set the display conditions and operation mode for playing back image or movie files as a Slide show in PC Free.

Procedure



Tilt the [♠] button to position the cursor on "Option" at the bottom left of the screen, and then press the [Enter] button.



Set each of the items.

Enable settings by positioning the cursor on the target item and pressing the [Enter] button.

Details of the items are given below.



| Display order | You can set the order of the files to be displayed. You can select sorting of the files into either file name order or revision date order. |
|-----------------------|---|
| Continuous Play | You can determine whether to repeat the Slide show. |
| Screen switching time | You can set the time for a single file to be displayed when running a Slide show. You can set the time for a single file to be displayed when running a Slide show. You can set a time between "No" (0) and 60 seconds. When you set "No", auto play is disabled. |
| Effect | This sets the transition effects between files. |



Tilt the [⋄] button to position the cursor on "OK", and then press [Enter].

The settings are applied.

If you do not want to apply the settings, position the cursor on "Cancel" and press the [Enter] button.



Preparing a Scenario (Using EMP SlideMaker2)

This chapter describes how to create and send scenario.

| Scenario Summary | 62 |
|---|----|
| Files that Can be Included in Scenarios | 63 |
| Turning a PowerPoint File into a Scenario | 64 |
| Converting all files in a single operation without starting up SlideMaker2 | 65 |
| Starting up SlideMaker2 and Converting Files | 67 |
| Scenario creation procedure | |
| Setting Scenario Properties | |
| • Including PowerPoint Files in Scenarios | 69 |
| Including all slides in a PowerPoint file Including only selected slides while checking thumbnails | 70 |
| • Including Image and Movie Files in Scenarios | |

| Editing a Scenario | 74 |
|--|----|
| Adding files and slides | 74 |
| Deleting a slide | 74 |
| Changing the order of slides | 74 |
| Sending Scenarios | 75 |
| Cases Like These | 77 |
| • Checking the Projection Scenario Status from a | |
| Computer | 77 |
| Setting Animations | 78 |
| • Setting the Slide Animation | 78 |

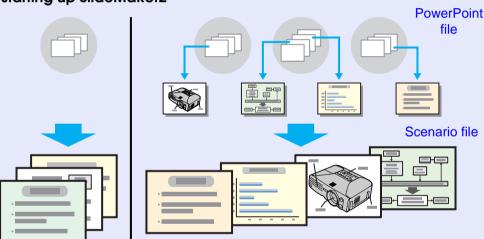
Scenario Summary

A scenario is a combination of PowerPoint, image, and movie files, arranged in a projection order and saved as a single file, created with EMP SlideMaker2.

Making a scenario allows you to easily and efficiently prepare presentation material by extracting the necessary parts of files, and arranging them in order without editing the original files.

Converting all files in a single operation without starting up SlideMaker2

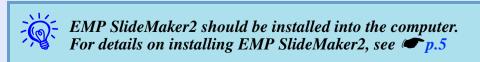
Converting all files in a single operation by starting up SlideMaker2



Transfer the created scenarios to store them on a USB storage device or SD card connected to the computer. Then, connect the USB storage device or SD card to the projector so that you can use the projector's PC Free function to project the scenario.

For connecting USB storage devices, see User's Guide

"Connecting and Removing USB Devices (EB-G5350/G5150 only)"



Create the PowerPoint file, the image files, and the movie files

From a computer



EMP SlideMaker2

There are two ways of using EMP SlideMaker2 to convert a PowerPoint presentation into a scenario.

• Drag & drop PowerPoint files to the EMP SlideMaker2 icon on the desktop p.65

• Starting up SlideMaker2 and Converting Files © p.67



Sending Scenarios p.75



PC Free

Projecting Scenarios p.56

From the projector

From a computer

Files that Can be Included in Scenarios

Any of the following file types can be combined into a single file to create a scenario.

| Туре | File Type (Extension) | Notes | |
|------------|--------------------------|---|--|
| PowerPoint | .ppt | Microsoft PowerPoint 2000/2002/ 2003 | |
| | .pptx | Microsoft PowerPoint 2007 | |
| Image | .bmp | Cannot reproduce images with a resolution greater than 1024×768 . | |
| | .jpg | Any version. However, CMYK color formats and progressive formats cannot be played back. | |
| Movie | .mpg | MPEG2-PS Movies that exceed a maximum size of 720 × 576 or are not in the same format as a DVD (sequence header arranged for each GOP) cannot be played back. The reproducible audio format is MPEG1 Layer 2.Linear PCM and AC-3 audio cannot be played back. | |
| Audio | .wav | PCM, 22.05/44.1/48.0 kHz, 8/16bit | |



- The following slide transition effects and animation settings in the PowerPoint "Slide Show" menu are reflected in a scenario.
- $\bullet Flv$ • Blinds \bullet *Box* • Checkerboard • Crawl • Dissolve • Random Bars • Peek • Spiral • Split • Stretch • Strips • Swivel • Wipe • Zoom Effects for screen transitions other than those mentioned

above are converted to "Cut", and animation is converted to "Animation Rules (Default: Cut)". p.78

• In the event that the image and movie files in the table on the left are to be played back as file units, they need not be made into scenarios. After saving the file to a USB storage device or SD card, direct playback and projection with PC Free are possible by connecting the USB storage device to the projector. p.58

The following table indicates whether scenarios created by the included software of other projectors can be opened by EMP SlideMaker2 of this projector.

| Projector | Software | Can be Opened with this Projector's EMP SlideMaker2 |
|--|-----------------|--|
| EMP-1825/1815 EMP-1715/1705 EMP-7950/7850 EMP-835 EMP-765/755/745/737 ELP-735 | EMP SlideMaker2 | 0 |
| ELP-8150/8150NL | EMP Scenario | × |
| ELP-715/505 | EMP SlideMaker | × |

Turning a PowerPoint File into a Scenario



PowerPoint files can be converted to scenarios by the following three methods. When you want to use a PowerPoint file as is, use either method 1 or 2.

1 Batch conversion without starting EMP Slidemaker2

All of the slides in a PowerPoint presentation can be batch-converted into a scenario. "Converting all files in a single operation without starting up SlideMaker2" p.65

2 Include a PowerPoint file from the file list

After the PowerPoint files have been batch converted to create scenarios, an image or movie file can then be converted to create another scenario.

"Starting up SlideMaker2 and Converting Files" p.67

Include only the slides you want from the thumbnails
Select only the PowerPoint slides you need and then convert them to a scenario.

p.67



• When creating scenarios with methods 1 to 2, the following animations set in PowerPoint are also reflected in the scenario.

| • Fly | • Blinds | • <i>Box</i> |
|----------------|---------------|--------------|
| • Checkerboard | • Crawl | • Dissolve |
| • Peek | • Random Bars | • Spiral |
| • Split | • Stretch | • Strips |
| • Swivel | • Wipe | • Zoom |

- Animations other than those mentioned above are replaced by the animations in "Animation Rules (Default: Cut)".

 p.78
- The picture quality for scenarios created with method 1 is "Standard" from a possible, "Highest image quality", "High Quality", and "Standard". When you want to create a scenario with a high image quality, use methods 2 to 3.

The following table shows the differences when using methods 1 to 3.

| | Image Quality | Animation Reflection | Send Scenario |
|---|--|-------------------------|------------------------|
| 1 | "Standard" fixed | Reflected | Continuous operation*1 |
| 2 | Select from "Highest image quality", "High Quality" and "Standard" | Reflected | Continuous operation*1 |
| 3 | Select from "Highest image quality", "High Quality" and "Standard" | Not reflected | Operating later*2 |

^{*1} When scenario creation is complete, the "Send Scenario" screen is automatically displayed.

^{*2} After creating the scenario, perform "Sending Scenarios" p.75.

Converting all files in a single operation without starting up SlideMaker2



The following explains how a scenario can be created easily, without starting EMP SlideMaker2.



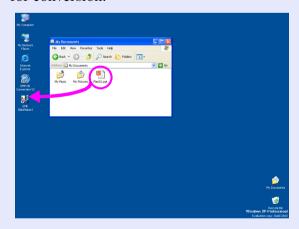
- Note that the following is not possible if EMP SlideMaker2 has been started. Close EMP SlideMaker2 first.
- After the scenarios have been incorporated, they will include the animation set with PowerPoint. When projecting with PC Free, this animation will be enabled.

 p.64

Procedure

- Connect the USB storage device or SD card that contains the scenario to the computer.
- Drag & drop the PowerPoint file icon to the program icon of EMP SlideMaker2 on the desktop.

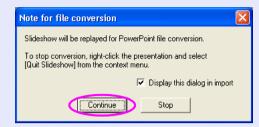
Note that, in this case, it is not possible to select multiple PowerPoint files and convert them as a batch. Select only one file for conversion.



EMP SlideMaker2 starts.



Check the message and click "Continue".



Check the mo

Check the message and click "Start".



It starts converting the file to a scenario. The Slide show is displayed during conversion.

If you stop the Slide show midway, the scenario closes without being created.



Once the Slide show reaches the end, click the screen.

The dialog box to specify the transfer destination of the scenario is displayed.





Select the drive and the folder where the USB storage or SD card is connected and click "OK".



Go to procedure 3 from "Sending Scenarios" p.75.



Scenarios made by dragging & dropping automatically take the name "Scnxxxx" (where xxxx is a number).

67

Starting up SlideMaker2 and Converting Files

Verify the following points before creating a scenario.

- The data to be combined to create a scenario, such as PowerPoint, image and movie files, must be created in advance.

Scenario creation procedure

Scenarios are created with the following procedure.

Start EMP SlideMaker2 and set the scenario properties (such as scenario name, background color, and image quality).

p.67



Include the files to be used in the scenario.

- "Including PowerPoint Files in Scenarios" p.69
- "Including Image and Movie Files in Scenarios" p.73





Once the scenario has been created, carry out the steps in "Sending Scenarios".

p.75

Setting Scenario Properties

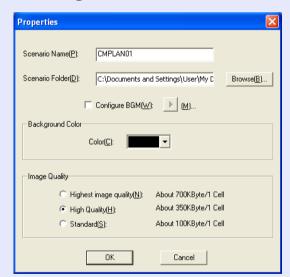
Procedure



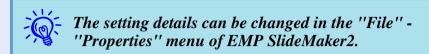
Start Windows on the computer, then select "Start" - "Programs" (or "All Programs") - "EPSON Projector" - "EMP SlideMaker2".

EMP SlideMaker2 starts, and the scenario properties are displayed.

Enter each of the items with reference to the following table, then click "OK".

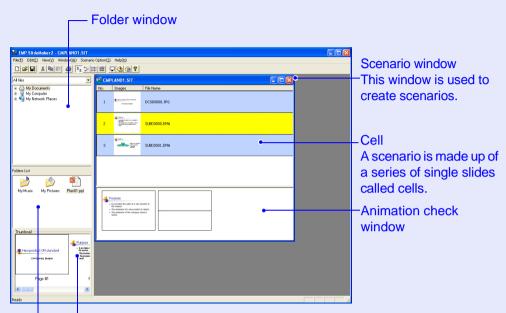


| Scenario Name | Enter the file name for the created scenario. Be sure to enter the file name. The file name can consist of up to 8 upper case letters and numerals. Limit the total number of characters of the file name and the directory name for the scenario folder to 127 or less. |
|------------------|---|
| Scenario Folder | Specify where to create the scenario folder to be used while creating the scenario. The name of the scenario folder will be the same as the name of the scenario. |
| Configure BGM | If you would like to play BGM during the scenario, check the box. The audio file (WAVE format) selection window is displayed if this is selected. On this window, select the file to be used as BGM. After selecting the audio file, play the file by clicking the ">" button on the right. Stop playback by clicking the " button. |
| Background Color | Selects the background color for image data in the scenario. |
| Image Quality | With EMP SlideMaker2, each slide in a PowerPoint file will be converted into a JPEG file and saved. This item lets you select the image quality when the slides are converted to JPEG files. You can select the quality from "Highest image quality", "High Quality" and "Standard". If you select "Standard", the quality will be lower compared to other settings. "Highest image quality" and "High Quality" are recommended. If JPEG files have been included directly into a scenario, this setting will be ignored and the JPEG file will be projected with its original image quality. |





The following window will be displayed.



Thumbnail window

Preview thumbnail images of the file that is clicked on in the file window.

File window

The files in the folder that is selected in the folder window appear here.



Refer to the EMP SlideMaker2 help for details on the EMP SlideMaker2 menu functions.

Including PowerPoint Files in Scenarios

PowerPoint files can be included into scenarios with the following two methods. When creating a scenario using the including Method, animations set in PowerPoint are released.

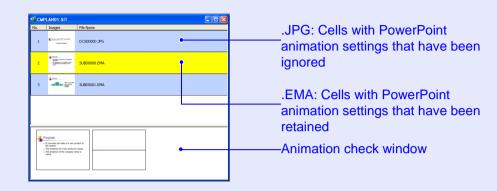
- Batch Including PowerPoint Files p.70

 After the scenarios have been incorporated, they will include the animation set with PowerPoint. When projecting with PC Free, this animation will be enabled.
- Including only selected slides when checking thumbnails
 If you include only a selection of slides, the animation settings
 that have been made using PowerPoint are ignored.

 p.72



Movie files included in a PowerPoint file cannot be played back on the scenario. Movie files must be individually converted to scenarios.





- Thumbnails cannot be displayed if PowerPoint is not installed on your computer.
- Although animations can be set in the properties window of EMP SlideMaker2, animations set in advance in the PowerPoint file operate more smoothly when played in the scenario. To set animations in PowerPoint slides, we recommend you set them in the PowerPoint file itself. If you want to make animation settings for images, or if you want to add animation settings to slides that lost their animation settings when they were included in the scenario, make the settings in the properties window of EMP SlideMaker2. p.79

Including all slides in a PowerPoint file

Drag & Drop the PowerPoint file in the file window to the scenario window to create a scenario. When scenario creation is complete, the "Send Scenario" screen is automatically displayed and the scenario can be transferred.

When slides are included with this method, animation set in PowerPoint remains effective.

Procedure

- Connect the USB storage device or SD card that contains the scenario to the computer.
- Start Windows on the computer, then select "Start" "Programs" (or "All Programs") "EPSON Projector" "EMP SlideMaker2".

EMP SlideMaker2 starts, and the scenario properties are displayed.

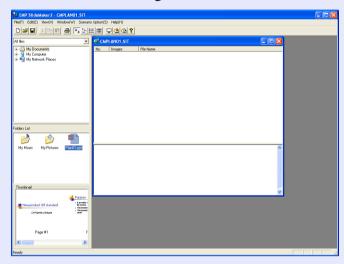
- 3 Set the scenario properties. p.67
- Select the folder containing the target PowerPoint file in the folder window.





Drag & drop the PowerPoint file from the file window to the scenario window.

Or, double-click the target PowerPoint file icon in the file window.





Check the message and click "Continue".





Check the message and click "Start".



The conversion to a scenario starts and the Slide show is performed automatically.

If the [Esc] key on the keyboard is pressed during the Slide show, the Slide show is canceled. In that case, the scenario closes before it can be created.

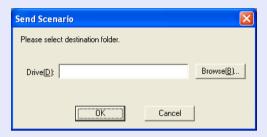


When the Slide show ends, click the screen.

The dialog box to specify the transfer destination of the scenario is displayed.



Select the drive and the folder where the USB storage or SD card is connected and click "OK".



Go to procedure 3 from "Sending Scenarios" p.75.



When creating a scenario with only one PowerPoint file, you can do that easily by a drag and drop operation.

p.65

Including only selected slides while checking thumbnails Use the following procedure to include only selected slides from a PowerPoint file into a scenario. Note that when this method is used to include the slides, any animations that have been set using PowerPoint are

Procedure

ignored.



Click the target PowerPoint file icon in the file window.



Double-click the thumbnails that you want to include into the scenario.

The selected slides will be displayed in the scenario window.

To select more than one slide and include them all at once,

- (1) Click the additional slides one at a time in the thumbnail window.
 - All slides that you click will be selected. If you click a slide that is already selected, it becomes unselected.
- (2) Once all the target slides have been selected, drag one of the selected slides into the scenario window and drop it at the place where it is to be added.

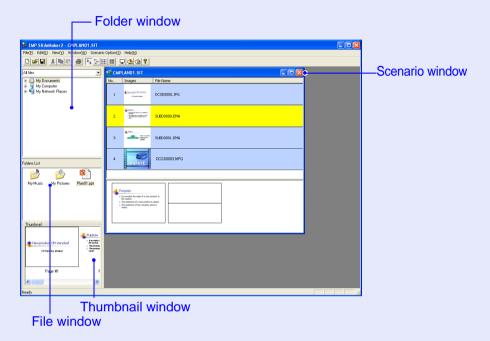
All of the selected slides will then be added to the scenario.

Go to procedure 3 of "Sending Scenarios".

p.75.

Including Image and Movie Files in Scenarios

Image files and movie files can be included into a scenario.



Procedure

(1) Click the target folder in the folder window.

The files that are contained in the folder will be displayed as a list in the file window.

Click the icon of the image file in the file window.

The contents of the image file are displayed in the thumbnail window.

In the case of a movie file, an icon will be displayed in the thumbnail window.

Double-click the icon of the target image file in the file window.

The selected file is displayed in the scenario window and it is included into the scenario.

To batch add more than one file, hold down the [Ctrl] key on the keyboard while clicking the files icons to be added. Once all the files to be added have been selected, drag one of the selected files into the scenario window and drop it at the place where it is to be added.

All of the selected files will then be added to the scenario.



To deselect all of the selected files, click the white area outside the icon.

Editing a Scenario

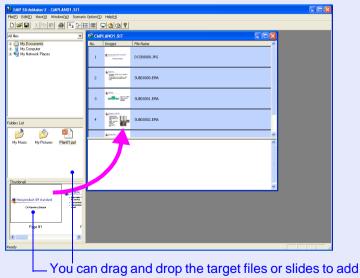
With PC Free, the scenarios in the scenario window are handled in order, starting from the top.

You can add and delete slides and files from a scenario or change their order to edit the scenario.

Adding files and slides

Procedure

Drag files that are displayed in the file window or PowerPoint slides that are displayed in the thumbnail window into the scenario window and drop them in the place where they are to be added.



 You can drag and drop the target files or slides to add them to the scenario window.

The newly changed scenario will be transferred.

Go to procedure $3 \bigcirc p.75$.

Deleting a slide

Procedure

Right-click in the cell to be deleted and then select "Clear" or "Cut" from the shortcut menu.

Changing the order of slides

Procedure

Drag & drop a cell in the scenario window to change the order of cells.

You can also display the shortcut menu, select "Cut" and then select "Paste".

The newly changed scenario will be transferred.

Go to procedure 3 p.75.

Sending Scenarios

To project a created scenario by the projector, send the scenario to a USB storage device using "Send Scenario" in EMP SlideMaker2. Specify a USB storage device or SD card that is connected to the computer's USB port as the destination.

It is also possible to set automatic projection and continuous projection of a scenario at projector startup. The automatic projection function is called autorun.



- When "Send Scenario" is performed, the scenario file is saved in the destination under the name "Scenario name.sit". Also, a folder with the same name as the scenario is created and each screen is converted to image files and saved according to image quality. However, in PC Free a folder with the same name as the scenario is not displayed.
- If you perform "Send Scenario" without saving, a folder with the same name as the scenario name and a "scenario name.sit" file are created in the scenario folder. Each screen is converted to image files and saved in the created folder according to the image quality.

Procedure



Once the scenario is completed, connect a USB storage device to the computer and then select "Scenario Options" - "Send Scenario".



A dialog box to specify the destination drive is displayed. Select the drive and the folder where the USB storage or SD card is connected and click "OK".





When a confirmation message is displayed, click "OK".

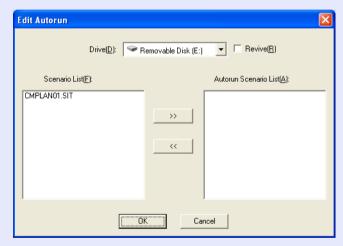
It is sent to the scenario destination selected.



When transfer is complete, a message is displayed confirming whether to perform autorun setup. If you want to set autorun, click "OK" and continue to the next procedure. Otherwise, click "Cancel" to close.



All scenario files within the destination drive are displayed in the scenario list on the left in the format "Folder name/File name".





When using autorun

To set a scenario to run automatically when the projector power is turned on, click the target scenario name in the scenario list, and click ">>>".

The scenario is displayed in the autorun scenario list on the right and set as an autorun file.

A scenario file in a folder with deep hierarchy or with a long folder name cannot be selected.

When projecting a scenario repeatedly

To start projecting from the first scenario again once projection of all scenarios in the "Autorun Scenario List" is complete, select "Revive" check box.



- Autorun can also be set by selecting "Scenario Option" "Edit Autorun".
- Autorun setting cannot be specified in EasyMP for PC Free.
- If there are two or more files set for autorun, they are played back in order from the top on the "Autorun Scenario List".
- 6 When the scenario for autorun is set, click "OK".
- Remove the USB storage device or SD card from the computer.

See the computer's user's guide for the removal method.

After finishing transferring your scenario, connect the USB storage device or SD card to the projector and start projection using PC Free. p.51

Cases Like These

Checking the Projection Scenario Status from a Computer

You can check on a computer how a created scenario is played back on a projector by using PC Free. All of the structural elements of the scenario such as images, animation, BGM, can be played.

Procedure



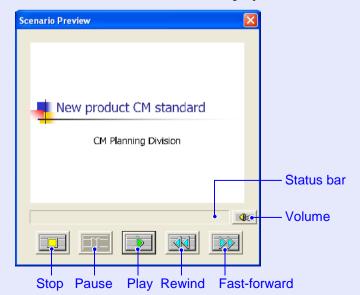
Open the scenario you want to check in EMP SlideMaker2.



Select "Scenario Options" - "Scenario Preview".



The Scenario Preview screen is displayed.



The following table shows the functions of each button.

| Stop | Stops playback and returns to the first slide. |
|------------------|--|
| Pause | Pauses the slides when "Automatically after" is selected for "Advance". • p.79 |
| Play | Starts the scenario preview. Also, this restarts stopped or paused scenarios. The following slide is displayed when "On mouse click" is set for "Advance". p.79 |
| Rewind | Returns to the previous slide or returns to the screen previous to the animation performance. The animation effects are not performed upon return. |
| Fast- forward | Proceeds to the next slide or shows the screen after animation performance. At this time the animation effects are not performed. |
| Volume | Performs volume control. Adjusts the volume of BGM. |
| Status bar | Displays the progress of the scenario on a bar. At first there is no bar display, and then the bar extends from left to right as the scenario progresses. The scenario ends at the right hand side of the bar. |



After you finish checking, click "X" at the top right of the window to close the scenario preview screen.

Setting Animations

The following PowerPoint animations are reflected in a scenario as well.

- Fly
- Blinds
- Box
- Checkerboard

- Crawl
- Dissolve
- Peek
- Random Bars

- SpiralSwivel
- SplitWipe
- StretchZoom
- Strips

You can set which animations replace those not mentioned above (Default: Cut).

Procedure

- 1
- Start EMP SlideMaker2.

Click "Cancel" if screen properties is displayed.

- Select "Scenario Option" "Animation Conversion Preferences".
- Select the set animation.

Setting the Slide Animation

With EMP SlideMaker2, you can set effects similar to the animation effects of PowerPoint for each cell in the scenario. You can project the slides that retain the animation set in PowerPoint by setting projection time or animation for each divided scene. In this case, right-click the target animation in the animation check window and click "Cell Properties".



If animations set in PowerPoint in advance are included in a scenario, the animations operate smoothly during scenario playback. To set animations in PowerPoint slides, we recommend you set them in the PowerPoint file itself. If you want to make animation settings for image files, or if you want to add animation settings to slides that lost their animation settings when they were included in the scenario, add the settings using the following method.



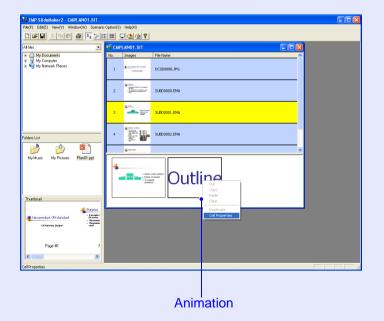
Procedure



Right-click in the target cell or the animation, and select "Cell Properties".

When making the same settings for multiple cells or animations, select multiple cells by holding down the [Shift] key or the [Ctrl] key on the keyboard, right-click and then select "Cell Properties".







The "Properties" screen is displayed. Set each of the items with reference to the following table, and then click "OK".



| Advance | When "Automatically after" is selected, you can set the switching time from 0 to 1800 seconds. When "On mouse click" is selected, switch slides by pressing the [1] or [1] buttons on the remote control during projection. |
|----------------------|---|
| Animation Effects | You can specify the effects to use during screen transition. Select the "Direction" depending on the animation selected. The following are examples of the effects. Fly: The image changes from the direction specified. Box In: The image changes from the inside. |



Appendix

| Connection Limitations | 81 |
|--|----|
| Supported Resolutions | 81 |
| Display Color | 81 |
| Connection Number | |
| • Others | 81 |
| When Using Windows Vista | 82 |
| Limitations when projecting from Windows Photo Gallery | |
| Limitations in Windows Aero | 82 |

| Troubleshooting | 83 |
|-----------------|----|
| Glossary | 92 |

Connection Limitations

When projecting computer images while running of EMP NS Connection, the following restrictions apply. Confirm these points.

Supported Resolutions

The following computer screen resolutions can be projected. You cannot connect to a computer with a resolution higher than <u>UXGA</u>.

- VGA→640 × 480
- SVGA \$\infty 800 \times 600^*
- XGA**1024 × 768*
- SXGA[▶]1280 × 960
- SXGA 1280 × 1024*
- SXGA+ $1400 \times 1050^{\circ}$
- UXGA 1600 × 1200

When the following messages are displayed, connect after setting the computer's resolution to SXGA or less.

One or more connected projectors do not support resolutions greater than SXGA. Reduce the screen resolution and reconnect.

If a computer with a special screen size is used where the ratio of height and width is not represented, a screen resolution closest to the width is selected from the list of seven above.

In this case, in wide screen the horizontal margins are projected, in narrow screen the empty vertical margins are black.

Display Color

The number of colors for computer screens can be projected.

| Windows | Macintosh |
|--------------|------------------------------------|
| 16-bit color | About 32,000 colors (16-bit) |
| 24-bit color | - |
| 32-bit color | About 16.7 million colors (32-bit) |

The operational guarantee for multi-screen display is 16-bit and 32-bit color.

Connection Number

You can connect up to four projectors to one computer and project simultaneously.

You cannot connect multiple computers to one projector simultaneously.

Others

- If the transmission speed of the wireless LAN is low, the network might be cut off easily even if you connect and shut down unexpectedly.
- Audio is not transmitted.
- When Movies are played back, they do not play back as smoothly as when displayed on the computer.
- Applications that use part of DirectX functions may not be displayed correctly.(Windows only)
- Cannot project full screen MS-DOS prompts.(Windows only)
- There are times when the image on the computer screen and the image projected by the projector may not match exactly.

^{*} Supported resolutions when multi-screen display function is on.



When Using Windows Vista

Note the following points when using EMP NS Connection with a computer running Windows Vista.

Limitations when projecting from Windows Photo Gallery

Note the following two limitations when using Windows Photo Gallery when running EMP NS Connection.

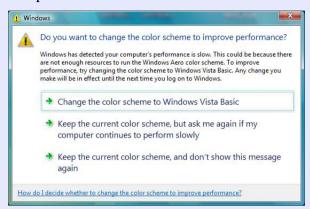
- Slide shows are played back in simple mode when projecting from Windows Photo Gallery.
- Because the toolbar is not displayed, you cannot make changes while playing a "Theme" (effects), regardless of the "Windows Experience Index" rating.
- Once simple mode has started, you cannot change modes while Windows Photo Gallery is running even if you close EMP NS Connection. Restart Windows Photo Gallery.
- You cannot play movies.

Limitations in Windows Aero

Note the following two limitations when the window design for your computer is Windows Aero.

- Layered windows are projected regardless of "Transfer layered window" from "Set options".
 - For example, when "Transfer layered window" for the EMP NS Connection toolbar is disabled, it should not be displayed on the computer's screen, however the toolbar is projected.

A few minutes after you connect a computer to the projector over a
network with EMP NS Connection, the following message is displayed.
It is recommended that you select "Keep the current color scheme, and
don't show this message again". This selection is enabled until the
computer is restarted.



83

Troubleshooting

If any of the following problems occur, refer to the pages given for each problem.

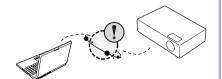
Problems concerning EasyMP

- Suddenly changes to the EasyMP screen p.84
- When a connection is made using EMP NS Connection, the projected image remains as is, and a connection cannot be made from another computer. p.84
- The projector is not found when EMP NS Connection is started p.85
- Cannot connect in "Advanced Connection Mode" or wired LAN connection p.86
- The image and sound for movies with EMP NS Connection are not displayed, the image is slow to appear, or either the movie or audio stop p.87
- When a connection is made using EMP NS Connection, a PowerPoint Slide show cannot be started p.87
- When a connection is made using EMP NS Connection, the screen does not refresh when running an Office application.

 p.88
- Cannot specify files with EMP SlideMaker2 p.88
- Error message when starting up EMP NS Connection
 p.88
- Error message when starting up EMP SlideMaker2 p.90

Problems concerning monitoring and control

■ E-mail is not sent even if an abnormality occurs in the projector p.91





■ EMP NS Connection cannot be used to make a connection

Check the message at the bottom-left of the screen and then apply the following countermeasures.

| Error Messages | Remedy |
|----------------|--|
| | You are using an old version of EMP NS Connection. A connection cannot be made. Install the current version from the EPSON Projector Software for Meeting & Presentation CD-ROM supplied with the projector. |

■ Suddenly changes to the EasyMP screen ERR at the bottom left of the screen: Check the numbers and make the following remedies.

| ERR Number | Error Meaning | Remedy |
|------------------|--|---|
| 2,50,53,245,-103 | Failed to startup EasyMP. | Turn the power for the projector off and then back on again. |
| 51,52,100 | Failed to process EasyMP. | When using EMP NS Connection, reconnect EMP NS Connection. When using USB display, reconnect the USB cable. |
| -101 | Communication was cut off from the access point. | Check the access point operation. |
| -102,-105 | Wireless communication is unstable. | Check the situation of network traffic, and reconnect EMP NS Connection after waiting for a while. |

■ When a connection is made using EMP NS Connection, the projected image remains as is, and a connection cannot be made from another computer.

| Check | Remedy |
|---|---|
| Did the presenter leave the conference room without cutting off the network connection? | With EMP NS Connection, the connection with the computer that was previously connected can be cut off when another computer tries to connect with the projector, and it connects with the computer that is trying to connect. Therefore, when a projector keyword is not set for the projector, or if you know the projector keyword, you can cut off the current connection and, if you perform a connection operation, you can connect to the projector. When a projector keyword is set for the projector, if you do not know the projector keyword, cut off projection from the projector and reconnect. To cut off connection from the projector, press the [Esc] button on the remote control, select "Close" from the close menu and press the [Enter] button on the remote control. When it cuts off, you can connect from the target computer. |



■ The projector is not found when EMP NS Connection is started

| Check | Remedy |
|---|--|
| Is the wireless LAN unit connected? For Wireless LAN | Check that the optional wireless LAN unit is securely connected. |
| Is the projector's configuration menu open? | While the configuration menu is displayed, network connection becomes invalid. Close the configuration menu and return to the EasyMP standby screen. |
| Are the computer's LAN card and the built-in LAN function available? | Check that LAN is valid by checking "Control Panel" -"System" in the device manager and so on. |
| Is the SSID the same as that of the access point? Quick Connection Mode | Set an SSID that is different from that of the access point. **Control of the User's Guide** "Network Menu (EB-G5350/G5150 only)" **The control of the access point of the access poin |
| Is the DHCP function for wired LAN turned ON? Quick Connection Mode | Turn OFF the "DHCP" setting for "Wired LAN" from the configuration menu. User's Guide "Network Menu (EB-G5350/G5150 only)" |
| Was the network adapter used selected correctly with EMP NS Connection? | If the computer has multiple LAN environments, it cannot connect unless the network adapter is selected correctly. When using a computer running Windows, start EMP NS Connection, and select the network adapter you are using from "Set options" -"Switch LAN". p.40 |
| For wireless LAN connection, is the wireless LAN setting enabled when the computer is in power save mode? | Enable the wireless LAN. |
| Are there any obstacles between the access point and the computer or projector? For Wireless LAN | Sometimes the electromagnetic wave situation prevents the projector from being found in a search. Check for any obstacles between the access point and the computer or projector, and change their position to improve the electromagnetic wave situation. |
| Is the computer's wireless LAN electromagnetic wave set to low? | Set the electromagnetic wave strength to maximum. |
| Does the wireless LAN conform to 802.11g, 802.11b, or 802.11a? | It is only compatible with standards 802.11g, 802.11b, and 802.11a, and not with other standards such as 802.11. |
| Is the firewall turned off, or has the firewall been registered as an exception? | When you do not wish to turn off the firewall or register the firewall as an exception, make the necessary settings to open the ports. The ports used by EMP NS Connection are "3620", "3621", and "3629". |



| Check | Remedy |
|--|---|
| Is the network cable connected correctly? For Wired LAN | Check that the network cable is connected correctly. Reconnect it if it is not connected or not connected properly. |

■ Cannot connect in "Advanced Connection Mode" or wired LAN connection

| Check | Remedy |
|--|--|
| Is the SSID setting different? | Set the computer, the access point, and the projector to the same SSID. **User's Guide** "Network Menu (EB-G5350/G5150 only)" |
| Is the same WEP key set? | When selecting WEP from "Security", set the access point, the computer, and the projector to the same WEP key. ** User's Guide "Network Menu (EB-G5350/G5150 only)" |
| Are the connection denial functions, such as MAC address* restrictions and port restrictions, set correctly at the access point? | Set the projector to allow connections from the access point. |
| Are the IP address, the subnet mask, and the gateway address for the access point and the projector set correctly? | When not using a DHCP, adjust each setting. **User's Guide** "Network Menu (EB-G5350/G5150 only)" **Index of the image |
| Are the access point and the projector's subnet different? | Select "Manual search" from EMP NS Connection, specify the IP address, and connect. p.33 |

■ The Slide show cannot be displayed on the desired display when using the multi-screen display.

| Check | Remedy |
|---|--|
| Are you using PowerPoint 2002 or an earlier version? For Windows | To set and use two or more <u>virtual displays</u> , use PowerPoint 2003, or limit the number of virtual displays to one before displaying the Slide show. |

■ Applications are no longer displayed from the computer's screen when using the multi-screen display.

| Check | Remedy |
|---|--|
| • | When EPSON Virtual Display is installed, another application sometimes runs on the virtual display. In this case, set "EPSON Virtual Display" to "Off" at "Screen properties". |



■ The mouse cursor is not displayed on the computer's screen.

| Check | Remedy |
|--|--|
| Is EPSON Virtual Display installed? For Windows | The mouse cursor was moved onto the virtual display. When the virtual display check box is cleared on the "Add-Remove EPSON Virtual Display" screen, the mouse pointer returns to the screen display area. |

■ The image and sound for movies with EMP NS Connection are not displayed, the image is slow to appear, or either the movie or audio stop

| Check | Remedy |
|--|---|
| Did you try to play back movies with Media Player or try to operate the screen saver preview? | Depending on the computer, the movie play back screen in Media Player may not be displayed, and the screen saver preview may not be displayed normally. |
| Is WEP encryption effective, or are multiple projectors connected? | The display speed decreases when WEP encryption is effective or multiple projectors are connected. |
| Have you enabled DHCP? | When DHCP is set to "On" in "Advanced Connection Mode" or "Wired LAN connection", if a DHCP server that can be connected to is not found, it takes time to enter EasyMP standby status. |
| Was EMP NS Connection started while a movie was playing, or were the resolution and color number changed? For Macintosh | When playing back movies, start EMP NS Connection first before starting play back. If EMP NS Connection is started during movie play back and the display screen resolution and color number are changed, in this case move the movie playback window, minimize it, or resize it and so on. |
| Is wireless LAN 802.11g/b being used in "Quick Connection Mode"? | Depending on the electromagnetic wave environment, there are times when the image and sound for movies may stop. When using the movie sending function, use "Advanced Connection Mode" or wireless LAN 802.11a in "Quick Connection Mode". |

■ When a connection is made using EMP NS Connection, a PowerPoint Slide show cannot be started

| Check | Remedy |
|-------------|---|
| | When connecting with EMP NS Connection, make sure you close PowerPoint first. Slide show might not run if connecting while it is started. |
| For Windows | |



■ When a connection is made using EMP NS Connection, the screen does not refresh when running an Office application.

| Check | Remedy |
|----------------------------------|--|
| Is the mouse moved continuously? | When you stop moving the mouse cursor, the screen is updated. If the screen does not update quickly, stop moving the mouse cursor. |

■ Cannot specify files with EMP SlideMaker2

| Check | Remedy |
|---|---|
| Is a PowerPoint file (.ppt) with a PowerPoint 95/97 format being used? | Files created with PowerPoint 95/97 and files saved in PowerPoint 95/97 format cannot be edited with EMP SlideMaker2. You can use after saving with PowerPoint 2000/2002/2003. p.63 |
| If a PowerPoint file (.ppt) cannot be included in a scenario, or it cannot be displayed as a thumbnail, is the Microsoft Office JPEG converter installed? | Install the JPEG converter. See the Microsoft Office User's Guide for details on installing the JPEG converter. |

■ Error message when starting up EMP NS Connection

| Check | Remedy |
|--|---|
| Failed to connect to the projector. | Try to connect again. If it still does not connect, check the network settings on the computer and the network settings for the projector's EasyMP. For details on the network settings to be made on the projector, see ** User's Guide "Network Menu (EB-G5350/G5150 only)". |
| The keyword does not match. Check how it is displayed by the projector, and enter the correct keyword. | Check the projector's keyword displayed on the EasyMP screen, and enter the projector's keyword. |
| The selected projector is busy. Do you want to continue the connection process? | You tried to connect to a projector that is connected to another computer. When the "Yes" button is clicked, it connects to the projector. The connection between the projector and the other computer is cut off. When the "No" button is clicked, it does not connect to the projector. The connection between the projector and the other computer is maintained. |
| Failed to reset EMP NS Connection. | Restart EMP NS Connection. If the message still appears, uninstall and then reinstall EMP NS Connection. p.5 |
| Cannot connect because the keyword was wrong. | When connecting to a projector for which a projector keyword has been set, the wrong keyword is entered. Check the keyword that is displayed on the projector's connection standby screen. After the connection is cut off and then reconnected, enter the projector keyword on the keyword entry screen that is displayed. p.11 |



| Check | Remedy |
|---|--|
| Failed to acquire network adapter information. | Check the following point. • Is a network adapter installed on the computer? • Is the driver for the network adapter used installed on the computer? After checking, restart the computer and connect again. If you still cannot connect, check the following. Check the network settings on the computer and the network settings on the projector. For details on the network settings to be made on the projector, see **User's Guide** "Network Menu (EB-G5350/G5150 only)". |
| One or more connected projectors do not support resolutions greater than <u>SXGA</u> *. Reduce the screen resolution and reconnect. | There is an ELP-735 projector in the connection destination. Change the computer's screen resolution to SXGA (1280×1024) or less. |
| There are projectors that do not respond. | You cannot connect to multiple projectors simultaneously. Check the network settings on the computer and the network settings on the projector. For details on the network settings to be made on the projector, see ** User's Guide* "Network Menu (EB-G5350/G5150 only)". |
| Enter the keyword displayed in the projector. | Check the projector's keyword displayed on the EasyMP standby screen, and enter the projector's keyword. |

■ Network settings are not restored after cutting the connection to the computer with EMP NS Connection.

| Check | Remedy |
|--|--|
| Are you manually connecting to a wireless LAN when the computer starts up? | Try connecting to the wireless LAN manually. |
| Quick Connection Mode | |



■ Error message when starting up EMP SlideMaker2

| Check | Remedy |
|---|---|
| **.SIT is already registered. (** Scenario file name) | Scenario files that have already been added to "Autorun Scenario List" cannot be added again. p.75 |
| Because the folder hierarchy is deep, the scenario file cannot be selected. | Because the hierarchy of the folder with the scenario file added to "Autorun Scenario List" is deep, it cannot be selected. Change the destination for sending the target scenario file. p.75 |
| Insufficient storage capacity on the disk. | Insufficient storage capacity in the drive to transfer scenario, cannot transfer the scenario. Make space in the drive so that the scenario can be sent by deleting any unnecessary files. |
| ** An invalid path is included. (** the path name that includes the scenario file name) | The path for the file to be opened was not found. Because of the following. The scenario file was moved to another folder since it was last saved with EMP SlideMaker2. The folder name containing the scenario file was changed since it was last saved with EMP SlideMaker2. The scenario file you are trying to open was deleted. Select "File" - "Open" and open the target scenario file, or search for it by using the Windows search function and so on. |
| ** The disk became full during accessing. (** the path name that includes the scenario file name) | Insufficient storage capacity in the drive containing the work folder, cannot save the scenario file. Make space in the drive containing the work folder so that the scenario file can be saved by deleting any unnecessary files. |
| The specified document cannot be opened. | The PowerPoint file you are trying to add to the scenario is corrupted or cannot be used because it is incorrect. Use another PowerPoint file. |
| Specify a different name or a different directory. | A file with this name already exists. Change the scenario name and then save. |



■ E-mail is not sent even if an abnormality occurs in the projector

| Check | Remedy |
|--|--|
| Is the wireless LAN unit connected? For Wireless LAN | Check that the optional wireless LAN unit is securely connected. |
| Is the network connect setting correct? | Check the projector's network settings. User's Guide "Network Menu (EB-G5350/G5150 only)" |
| Is "Standby Mode" set to "Network On"? | To use the Mail Notification function when the projector is in standby, set "Network On" in "Standby Mode" from the configuration menu. ** User's Guide "Extended Menu" |
| Did a fatal abnormality occur and the projector come to a sudden stop? | When the projector comes to a sudden stop, e-mai cannot be sent. If, after checking the projector, the abnormal state continues, contact your local dealer or the nearest address provided in the Support and Service Guide. Epson Projector Contact List |
| Is power being supplied to the projector? | Check that your electrical outlet or power source is functioning correctly. |
| Is the network cable connected correctly? For Wired LAN | Check that the network cable is connected correctly. Reconnect it if it is not connected or not connected properly. |

Glossary



This section explains easily terms that are used with the projector and difficult terms that are not explained in the text of this guide. For details, refer to other commercially available publications.

| Ad hoc | A method of wireless LAN connection that communicates with wireless LAN clients without using an access point. It is not possible to communicate with two or more devices simultaneously. |
|-----------------|--|
| DPOF | An abbreviation of Digital Print Order Format, this is a format for recording information (photos that you want to print, number of copies, and so on) to print photos taken with a digital camera in recording media such as memory cards. |
| MAC address | An abbreviation of Media Access Control. The MAC address is an ID number unique to each network adapter. A unique number is assigned to each network adapter, and data is transmitted between network adapters based on this identification. |
| SVGA | A type of video signal with a resolution of 800 (horizontal) \times 600 (vertical) dots that is used by IBM PC/AT-compatible computers. |
| SXGA | A type of video signal with a resolution of 1,280 (horizontal) \times 1,024 (vertical) dots that is used by IBM PC/AT-compatible computers. |
| UXGA | A type of video signal with a resolution of $1,600$ (horizontal) \times $1,200$ (vertical) dots that is used by IBM PC/AT-compatible computers. |
| VGA | A type of video signal with a resolution of 640 (horizontal) × 480 (vertical) dots that is used by IBM PC/AT-compatible computers. |
| Virtual display | The screen for one computer is output to multiple displays. A large virtual screen can be created by using multiple displays. |
| XGA | A type of video signal with a resolution of 1,024 (horizontal) × 768 (vertical) dots that is used by IBM PC/AT-compatible computers. |

General Notice:

IBM, DOS/V, and XGA are trademarks or registered trademarks of International Business Machines Corporation.

Macintosh, Mac, and iMac are trademarks of Apple Inc.

Windows, WindowsNT, Windows Vista, and PowerPoint are trademarks or registered trademarks of Microsoft Corporation in the United States. HDMI and High-Definition Multimedia Interface are the trademarks or registered trademarks of HDMI Licensing LLC.

This product includes RSA-BSAFE[®] Cryptographic software from RSA Security Inc.RSA Security Inc. All rights reserved.RSA and BSAFE are either registered trademarks or trademarks of RSA Security Inc. in the United States and/or other countries.

This product includes *NetNucleus*® *WPA* Cryptographic software from TOSHIBA INFORMATION SYSTEMS CORPORATION.

NetNucleus is a registered trademark of TOSHIBA INFORMATION SYSTEMS CORPORATION in the Japan.

Pixelworks and DNX are trademarks of Pixelworks Inc.

EasyMP is a trademark of Seiko Epson Corporation.

Other product names used herein are also for identification purposes only and may be trademarks of their respective owners. Epson disclaims any and all rights in those marks.

Software Copyright:

This product uses free software as well as software to which this company holds the rights.

The following is information on the free software used by this product.

1.LGPL

- (1) This company uses free software for this product under the terms of the GNU LESSER General Public License Version 2, June 1991 (henceforth "LGPL") or later versions.
 - You can see the full text of the LGPL on the following Web sites. [LGPL]http://www.gnu.org/licenses/lgpl.html

This company, under the terms of the LGPL, discloses the source code for the free software used in this product based on the LGPL. Contact the support personnel as provided in the Epson Projector Contact list to reproduce, modify, and/or distribute the free software concerned.

Please follow the conditions of the LGPL when reproducing, modifying, and/or distributing the free software concerned. Also, the free software concerned is offered "as is" with no guarantee or warranty what so ever. The term guarantee includes, but is not limited to, appropriate commercialization, business potential, purpose of use, and does not infringe on third person rights (including, but not limited to, patent rights, copyrights, and trade secrets).

- (2) Furthermore, as stated in (1), there is no guarantee for free software that is included in this product to which the LGPL applies because of the characteristics of the free software that has already used in this product; any problems in this product (including problems that originate with the free software concerned) do not influence the conditions of the guarantee (written guarantee) issued by this company.
- (3) Under the terms of the LGPL, the source code as well as authorship for the free software used in this product is disclosed as stated in (1).

2. Other free software

As well as the free software used under the terms of the LGPL, this company also uses the following free software for this product.

Hereafter, each author, the conditions, and so on are described in the original. Furthermore, there is no guarantee for free software because of the characteristics of the free software that has already been used in this product; any problems in this product (including problems that originate with the free software concerned) do not influence the conditions of the guarantee (written guarantee) issued by this company.

(1) libpng

Copyright© 1998-2004 Glenn Randers-Pehrson

Copyright© 1996-1997 Andreas Dilger

Copyright© 1995-1996 Guy Eric Schalnat, Group 42, Inc.

(2) zlib

Copyright© 1995-2003 Jean-loup Gailly and Mark Adler

GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright© 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of

freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate

copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
 - a) The modified work must itself be a software library.
 - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
 - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
 - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License,

and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
 - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not

permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

- 15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and a brief idea of what it does.>
Copyright© <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice

That's all there is to it!

For embedded multimedia software:

This product contains embedded multimedia software licensed from Ingenient Technologies, Inc. (www.ingenient.com).

Copyright © 2000-2007 Ingenient Technologies, Inc. All rights reserved.

For MPEG-4 ASP:

With respect to a Licensee offering MPEG-4 Video Decoders and/or Encoders the following notice shall be given: THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE MPEG-4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL, INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA,LLC. SEE HTTP://WWW.MPEGLA.COM.

For MPEG-4 AVC:

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT LICENSE FOR THE PERSONAL PORTFOLIO AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY OBTAINED FROM MPEG LA, L.L.C. SEE HTTP:// WWW.MPEGLA.COM

For WMV/WMA (Microsoft):

This product is protected by certain intellectual property rights of Microsoft. Use or distribution of such technology outside of this product is prohibited without a license from Microsoft.